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Final Environmental Impact Statement for North Jefferson County Kentucky Wastewater Facilities

(U.S.) Environmental Protection Agency
Atlanta, GA

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NEPA Compliance Section
345 Courtland St., N.E.
Atlanta, Georgia 30365

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This Final EIS addresses proposed wastewater facilities for northern Jefferson County, Kentucky. The Final EIS preferred alternative proposes a limited regional wastewater management system that will relieve existing septic tanks and package plants in most of the study area. At the option of local authorities, this system could be expanded to serve future growth, but such expansion would not be eligible for federal funding under current laws.

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United States
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Agency

Region 4
345 Courtland Street, NE
Atlanta, GA 30365

EPA 904/6-84 119
July 1984

Environmental Impact Statement

Final

North Jefferson County, Kentucky Wastewater Facilities

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

AUG 10 1984

TO: ALL INTERESTED AGENCIES, PUBLIC GROUPS AND CITIZENS

Enclosed for your review and comment is the Final Environmental Impact Statement (EIS) for proposed wastewater facilities for North Jefferson County, Kentucky.

This EIS was prepared in compliance with the National Environmental Policy Act and implementing Agency regulations. In accordance with these regulations, the Final EIS will be filed with EPA's Office of Federal Activities. Availability of the EIS will then be announced in the Federal Register, beginning a 30-day comment period. (The Federal Register date is the same as the date of this notice.) EPA will take no administrative action on this project until the close of the comment period.

Your review of this document and any comments you may have are appreciated. Please send all comments to Ronald J. Mikulak, Project Officer, NEPA Compliance Section at the above address.

FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR
NORTH JEFFERSON COUNTY, KENTUCKY

Prepared By
U.S. Environmental Protection Agency
Region IV
Atlanta, Georgia

This EIS addresses proposed wastewater management facilities for northern Jefferson County, Kentucky. Four major management alternatives were evaluated in this EIS. These alternatives ranged from a continued reliance on existing on-site systems and package treatment plants to a complete regional conveyance and treatment system serving virtually the entire study area.

The EIS selected alternative is a limited regional sewer system that will relieve existing septic tanks and package plants in most of the study area. At the option of local agencies, this system could be expanded to serve future growth, but such an expansion would not be eligible for federal funding under existing laws.

Comments or inquiries should be directed to:

Ronald J. Mikulak
Project Officer
NEPA Compliance Section
Environmental Assessment Branch
U.S. Environmental Protection Agency
Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365
(404) 881-3776

Approved by

Charles R. Jeter
Regional Administrator

June 8, 1984
Date

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION IV

ATLANTA, GEORGIA

FINAL

ENVIRONMENTAL IMPACT STATEMENT

FOR

NORTH JEFFERSON COUNTY, KENTUCKY

JUNE 1984

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PREFACE

In accordance with federal policy, the metric system is used in this report for expressing units of measure; equivalent measurements in the English system are given in parentheses. Exceptions to this rule occur when measurements have been specified in English units in legal or regulatory documents and when standard construction material sizes are specified in English units. Such measurements are introduced here as English units with the metric units given parenthetically, but thereafter the metric units are used as the primary means of expression. For reference, abbreviations and equivalencies of the units used in this report are listed below.

1 inch (in.) = 2.54 centimeter (cm)
1 mile (mi) = 1.61 kilometer (km)
1 acre (ac) = 0.405 hectare (ha)
1 gallon per day (gal/d) = 0.00379 cubic meter per day (m^3/d)
1 million gallons per day (mgd) = 3,790 m^3/d
1 mgd = 0.0438 cubic meter per second (m^3/s)

1 cm = 0.394 in.
1 km = 0.621 mi
1 ha = 2.47 ac
1 m^3/d = 264 gal/d
1 m^3/d = 0.000264 mgd
1 m^3/s = 22.8 mgd

EXECUTIVE SUMMARY OF THE ENVIRONMENTAL IMPACT STATEMENT FOR NORTH JEFFERSON COUNTY, KENTUCKY

Draft ( )
Final (X)

Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, Georgia 30365

Type of Action:

Administrative Action (X)
Legislative Action ( )

1. EXECUTIVE SUMMARY

1.1 Existing Situation

The Louisville and Jefferson County Planning Commission has projected that the North County area (Figure 1) will be the major growth area of Jefferson County over the next twenty years. The area, however, is experiencing public health and water pollution problems caused by failing septic tank systems and malfunctioning wastewater treatment plants.

On-site systems in the EIS study area number approximately 7,200 and consist usually of a septic tank and a lateral-trench disposal field. On the basis of infrared aerial photography, the areawide failure rate of these on-site systems is estimated to be at least 15 percent. The failures are believed to be caused by unsuitable soils (depth to bedrock too shallow; percolation rate too slow; water table too high), hydraulic overloading (effluent discharge rate greater than percolation rate), or lack of maintenance (solids overflow causing clogged soils).

Use of septic tanks in major new subdivisions was banned by the Louisville and Jefferson County Department of Public Health in 1973, and their use outside of such areas was discouraged unless no other treatment method was feasible. In 1978 the Board of Health adopted new regulations restricting septic tank use to lots of 5 ac (2 ha) or more for lots created after June 1, 1978.

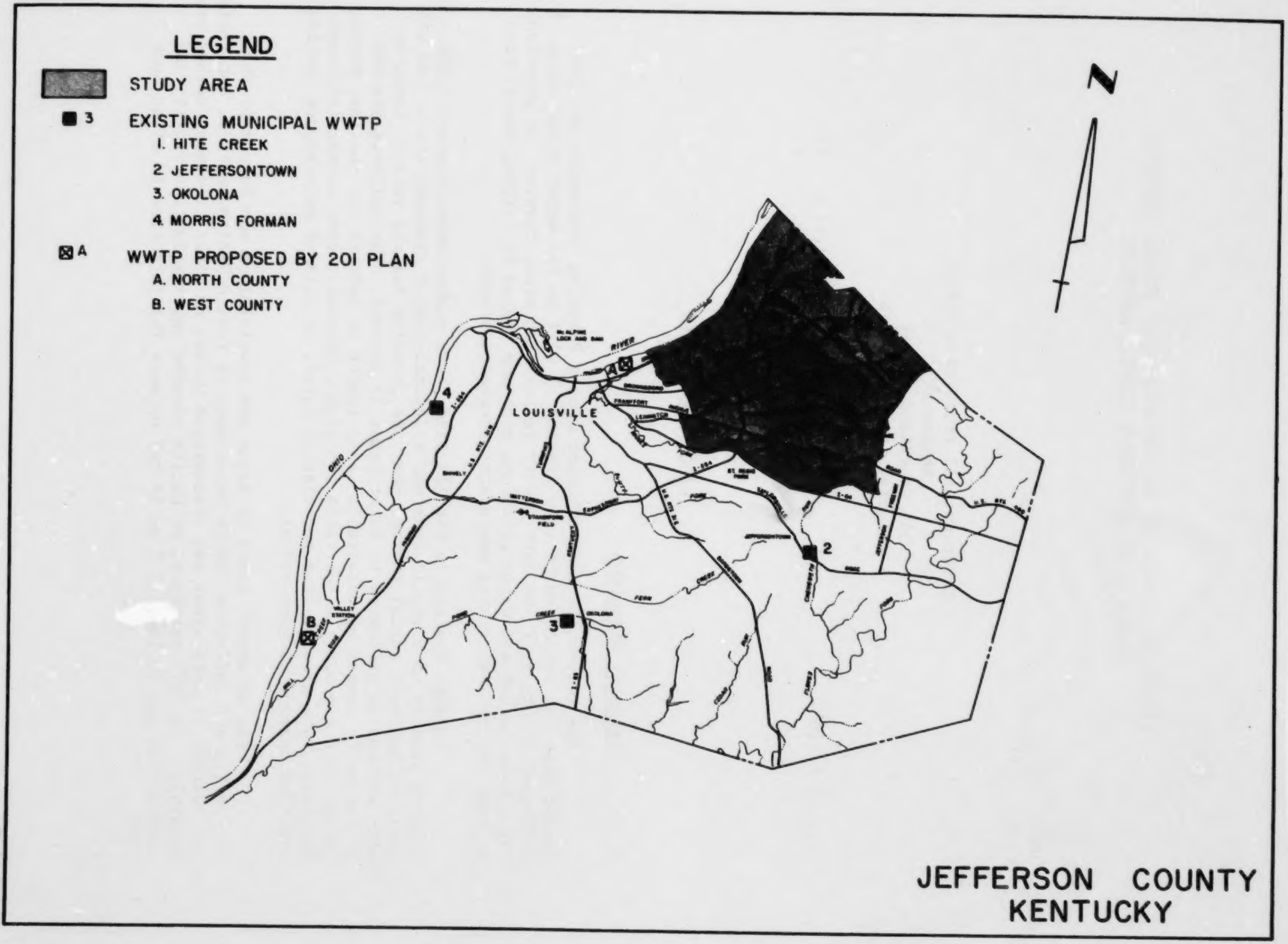

LEGEND
STUDY AREA
■ 3 EXISTING MUNICIPAL WWTP
1. HITE CREEK
2. JEFFERSONTOWN
3. OKOLONA
4. MORRIS FORMAN
☒ A WWTP PROPOSED BY 201 PLAN
A. NORTH COUNTY
B. WEST COUNTY
N
LOUISVILLE
OHIO
RIVER
McALPINE LOCK AND DAM
1
2
3
4
A
B
JEFFERSON COUNTY
KENTUCKY

FIGURE 1

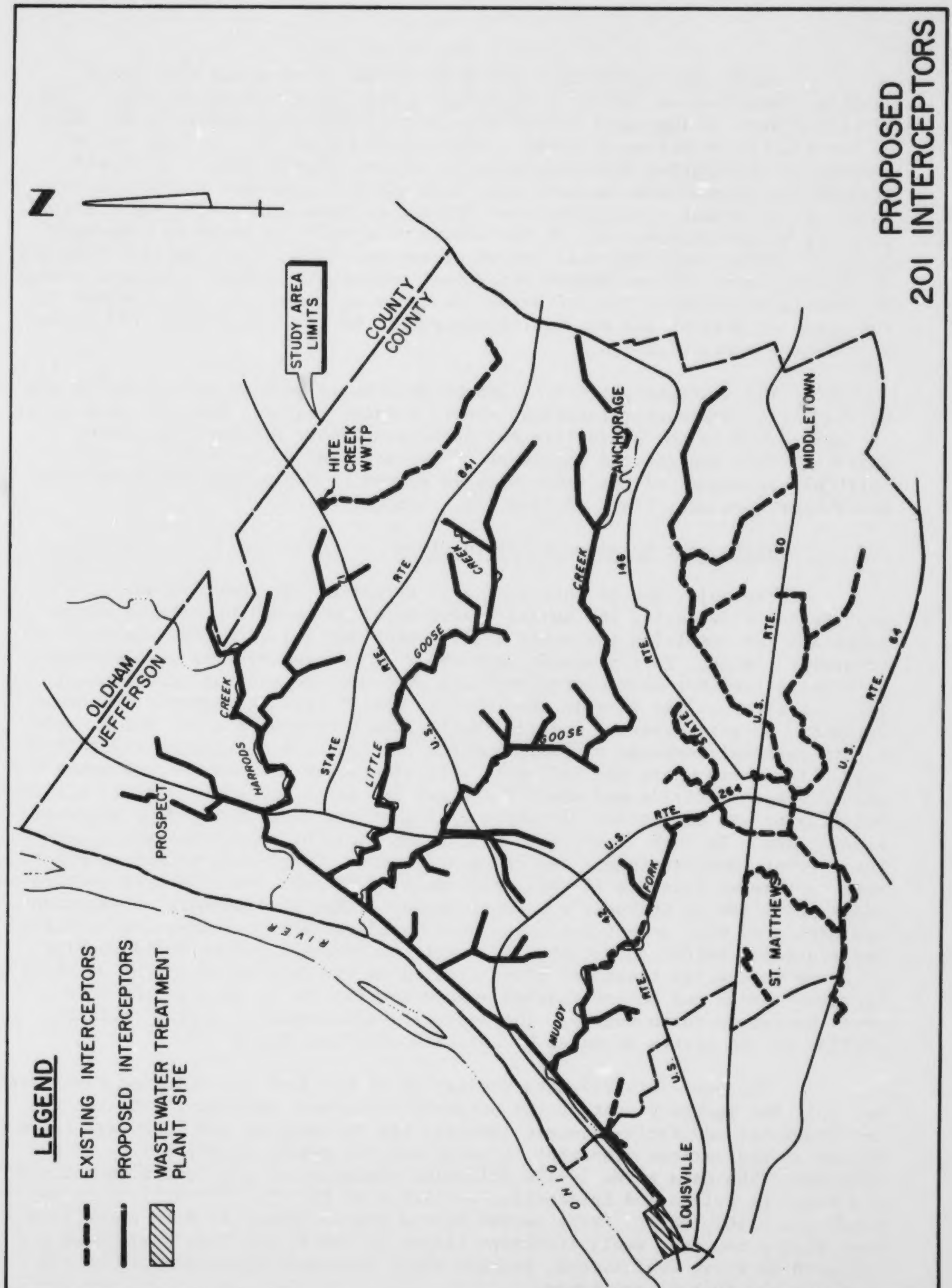
Small-area wastewater treatment plants in the study area serve schools, institutions, parks, a shopping center, and residential areas. The 49 plants have an aggregate design flow of 0.21 m^3/s (4.9 mgd); all but five of the plants are privately owned. Most of the plants fail to meet the requirements of existing discharge permits, either because they are old and starting to deteriorate, because they have not been upgraded to provide the levels of treatment required by new permits, or because they are not operated properly by the owners. All of the plants were built to serve as temporary treatment units until regional sewers became available. As a matter of policy Jefferson County and the Health Department regard all package treatment plants as interim solutions. The Jefferson County Judge/Executive, the Chairman of the Board of Health, and the Health Department have all confirmed this policy in correspondence with EPA.

The southern portion of the study area is sewered and served by the Morris Forman Wastewater Treatment Plant, a large regional facility (4.6 m^3/s; 105 mgd) owned by the Louisville and Jefferson County Metropolitan Sewer District (MSD) and located southwest of and adjacent to Louisville. The northeastern corner of the study area is served by MSD's Hite Creek Advanced Wastewater Treatment Plant (0.19 m^3/s; 4.4 mgd).

1.2 Wastewater Management Alternatives

The objective of this EIS is to determine the most cost-effective program for eliminating the public health problems caused by failing septic tanks and for resolving the water quality problems caused by the small-area treatment plants. Four areawide wastewater management systems were developed as alternatives for eliminating existing problems and meeting future needs. The four alternatives vary in the relative mix of three wastewater treatment options: on-site systems, upgraded small-area treatment plants, and a North County regional sewerage system. On-site systems were considered feasible in only a few areas where the soil will tolerate properly installed and maintained disposal fields and where lot sizes are large enough--0.4 ha (1 ac) and greater--to accommodate leachate fields of the size required by Kentucky regulations. In such areas, failing systems could be rehabilitated to meet the current, more-stringent design requirements. Small-area treatment plants were considered feasible if they were designed to meet the discharge requirements specified by Kentucky's Natural Resources and Environmental Protection Cabinet. For most existing plants, this would require upgrading the facility and providing better operation. The regional sewerage system would consist of a new wastewater treatment plant located on the Ohio River at the mouth of Beargrass Creek and an interceptor system serving one or more of the main creek basins in North County. The most extensive regional system would be similar to the system proposed by the 1974 201 Plan (Figure 2).

The cost-effectiveness evaluation of the four alternatives considered not only the monetary cost of the proposed management programs, but also the environmental and socio-economic impacts, the reliability and technical feasibility of the various treatment options, and the public acceptability of the programs. The data given in the following summaries of the four alternatives are based on prices and information available at the time the evaluation was conducted (1980-1981). Areas served by the Morris Forman or Hite Creek treatment plants and four small treatment plants in the Floyds Fork basin were not included in these evaluations, because their treatment systems would be the same for all four alternatives.



PROPOSED 201 INTERCEPTORS

LEGEND
EXISTING INTERCEPTORS
PROPOSED INTERCEPTORS
WASTEWATER TREATMENT PLANT SITE
N
STUDY AREA LIMITS
OLDHAM COUNTY
JEFFERSON COUNTY
HITE CREEK WWTP
PROSPECT
HARRODS CREEK
STATE RTE. 1
LITTLE GOOSE CREEK
U.S. RTE. 42
GOOSE CREEK
STATE RTE. 841
ANCHORAGE
STATE RTE. 146
MUDDY FORK
STATE 264
MIDDLETOWN
U.S. RTE. 60
U.S. RTE. 64
ST. MATTHEWS
LOUISVILLE
OHIO RIVER

FIGURE 2

1.2.1 No-Federal-Action Alternative

The first wastewater management alternative, the no-federal-action alternative (often referred to simply as the no-action alternative), assumed that no federal funds would be available for wastewater management and that existing management methods would be continued. It also assumed that public health problems would be minimized by relieving areas with failing septic tanks, either by rehabilitating the failing systems or by abandoning them and connecting the houses to new or existing small-area treatment plants. Future development, in light of the Health Department restriction on septic tanks to lots of 2 ha (5 ac) or more, would use package plants for wastewater treatment.

The estimated costs for this alternative are:

Capital Cost	$141,000,000
Average Annual Operating Cost	$ 4,100,000
Present Worth	$113,000,000
Average Annual Household Cost	$ 600

Environmental Impacts

The number of discharges to area streams will increase from the current 49 to an estimated 70-80.

Socio-Economic Impacts

Short-term construction activities will affect most existing neighborhoods. Conflicts may arise between local government and private interests over who is to upgrade existing service or provide future service. All construction will be funded by local government or private interests. Local enforcement activities will have to increase to meet the demands of 70-80 treatment plants. Public health and nuisance risks are greatest for this alternative because of the higher probability of failure or improper operation for such a large number of small-area treatment plants.

Technical Feasibility

This alternative has the lowest technical reliability because of the large number of privately owned small-area plants. Small-area plants are also less flexible in meeting short-term variations because of less frequent and less competent supervision.

Public Acceptability

This alternative probably has the least public acceptance because of the large number of discharges to the area's streams, which are easily accessible, and because of the presence of treatment plants in almost every community. Local agencies and government also consider this alternative the least acceptable.

1.2.2. 201 Alternative

The second management alternative involved sewering virtually the entire North County area and treating the wastewater at a new regional plant located on the Ohio River at the mouth of Beargrass Creek. Such a regional system was proposed in 1974 by the Water Quality Management Plan for Jefferson County, Kentucky, and Clark and Floyd Counties, Indiana (the 201 Plan). All septic tanks and package treatment plants would be abandoned and all houses would be connected to the regional system, which would be operated by MSD. Future development would also be connected to the system.

The estimated costs for this alternative are:

Capital Cost	$163,000,000
Average Annual Operating Cost	$ 1,800,000
Present Worth	$ 93,000,000
Average Annual Household Cost	$ 370

Environmental Impacts

Discharges to the area's small streams will be eliminated. A new discharge directly to the Ohio River will occur, but at 0.1% of the river's low flow. Construction impacts will occur along 95 km (59 mi) of interceptor routes.

Socio-Economic Impacts

Construction activities will affect most existing unsewered areas and recreational areas along stream valleys. Construction funding will be split between EPA and local government. Public health risks will be virtually eliminated as septic tanks and small treatment plants are abandoned.

Technical Feasibility

This alternative has greater technical reliability than the others, because a large regional facility is usually operated more efficiently than small-area plants. Short-term variations in operations and long-term process changes can be made more easily because of close attention from a full-time, professional staff. When problems occur, however, they can be of a larger and more significant nature.

Public Acceptability

This alternative is probably the most acceptable to the local public, because it relieves the concerns over failing septic tanks and polluted streams. It has the strong endorsement of local agencies and government.

1.2.3. LS1 Alternative

The third management alternative involves a limited regional sewer system and some continued reliance on package treatment plants. The LS1 alternative relieves areas with significant numbers of failing septic tanks by connecting all developments in the Goose Creek, Little Goose Creek, and Muddy Fork drainage basins to a regional sewerage system and by relieving the remaining few problem areas with package treatment plants. Under subalternative LS1a, future population would be provided with wastewater management facilities similar to those described under the no-action alternative: Future subdivisions would be provided with collector sewers and small-area treatment plants with surface water or land discharges; regional interceptor sewers would be designed with capacity only for existing flows. Subalternative LS1c would provide wastewater management for future populations adjacent to a regional interceptor by providing adequate capacity for future flows in the regional system. Future growth not adjacent to an interceptor would be served by small-area treatment plants.

The estimated costs for the LS1a and LS1c subalternatives are:

Capital Cost	a)	$157,000,000	c)	$152,000,000
Average Annual Operating Cost	a)	$ 2,800,000	c)	$ 2,700,000
Present Worth	a)	$100,000,000	c)	$ 98,000,000
Average Annual Household Cost	a)	$ 450	c)	$ 430

Environmental Impacts

Existing small plant discharges will continue in Harrods Creek only; under LS1a, future small plants will discharge into Goose, Little Goose, and Harrods Creeks. A new discharge will occur directly into the Ohio River, but at less than 0.1% of the river's low flow. Construction impacts will occur along 52 km (32 mi) of interceptor routes.

Socio-Economic Impacts

Construction activities will affect existing unsewered areas and recreational areas along all stream valleys except Harrods Creek. Construction funding will be split between EPA and local government. Local enforcement activities for small plants will be about half of existing needs. Public health risks from package plants and septic tanks will be greatly reduced or eliminated in all but the Harrods Creek basin.

Technical Feasibility

This alternative is intermediate in technical feasibility between no-federal-action and 201. The regional system offers reliability and flexibility, but there are still many small-area plants, which are less reliable and flexible.

Public Acceptability

This alternative is probably intermediate in public acceptance between no-federal-action and 201. The regional system relieves much of the concern with failing septic tanks and polluted streams, but there are still many small-plant discharges to the area's streams.

1.2.4 LS2 Alternative

The fourth management alternative also involves a limited regional sewer system and some continued reliance on package treatment plants. The LS2 alternative relieves areas with existing package treatment plants and areas with a significant number of failing septic tanks by connecting essentially all existing development to the regional system. Under subalternative LS2a, future subdivisions would be provided with collector sewers and small-area treatment plants; regional interceptors would be designed with capacity only for existing flows. Subalternative LS2c would provide wastewater management for future populations adjacent to a regional interceptor by providing adequate capacity for future flows in the regional system. Other future subdivisions would be provided with collector sewers and small-area treatment plants.

The estimated costs for the LS2a and LS2c subalternatives are:

Capital Cost	a)	$160,000,000	c)	$157,000,000
Average Annual Operating Cost	a)	$ 2,500,000	c)	$ 2,100,000
Present Worth	a)	$ 98,000,000	c)	$ 94,000,000
Average Annual Household Cost	a)	$ 450	c)	$ 390

Environmental Impacts

Almost all existing small-plant discharges will be eliminated, but future plants under LS2a will discharge into Goose, Little Goose, and Harrods Creeks. A new discharge will occur directly into the Ohio River, but at less than 0.1% of the river's low flow. Construction impacts will occur along 64 km (40 mi) of interceptor routes for LS2a and 71 km (44 mi) for LS2c.

Socio-Economic Impacts

Construction activities will affect existing unsewered areas and recreational areas along stream valleys. Construction funding will be split between EPA and local government. Local enforcement activities for small plants will decrease to 10-40% of existing needs. Public health risks from package plants and septic tanks will be greatly reduced or eliminated.

Technical Feasibility

This alternative is intermediate in technical feasibility between LS1 and 201. The regional system offers reliability and flexibility, but there are still some small-area plants, which are less reliable and flexible.

Public Acceptability

This alternative is probably intermediate in public acceptance between LS1 and 201. The regional system relieves much of the concern with failing septic tanks and polluted streams, but there are still some small-plant discharges to the area's streams.

1.3 Recent Changes in the Construction Grants Program

Since the EIS process began, several significant changes have occurred in EPA's construction grants program. In December, 1981, Congress enacted and the President signed amendments to the Clean Water Act. Among other things, these amendments provided for (1) a lower authorization for construction grants than had occurred in previous years; (2) a reduction in the federal share of construction costs from 75 percent to 55 percent for all projects approved after September 30, 1984; (3) a prohibition on the use of federal funds for conveyance or treatment capacity beyond that necessary to serve the population existing at the time of the grant award, or 1990, whichever comes first; and (4) elimination of grants for conventional collector systems after September 30, 1984, except that a governor may elect to use up to 20 percent of a state's allocation for collectors or other previously eligible projects.

Based on Kentucky's priority list for funding construction grants projects, grant awards for North County facilities are unlikely to occur before 1987. For this EIS, therefore, it was assumed that (1) federal participation will be a maximum of 55 percent of eligible costs; (2) conveyance and treatment capacity will be eligible only to serve the needs existing at the time of grant award, or 1990 at the latest; and (3) collector systems will not be eligible.

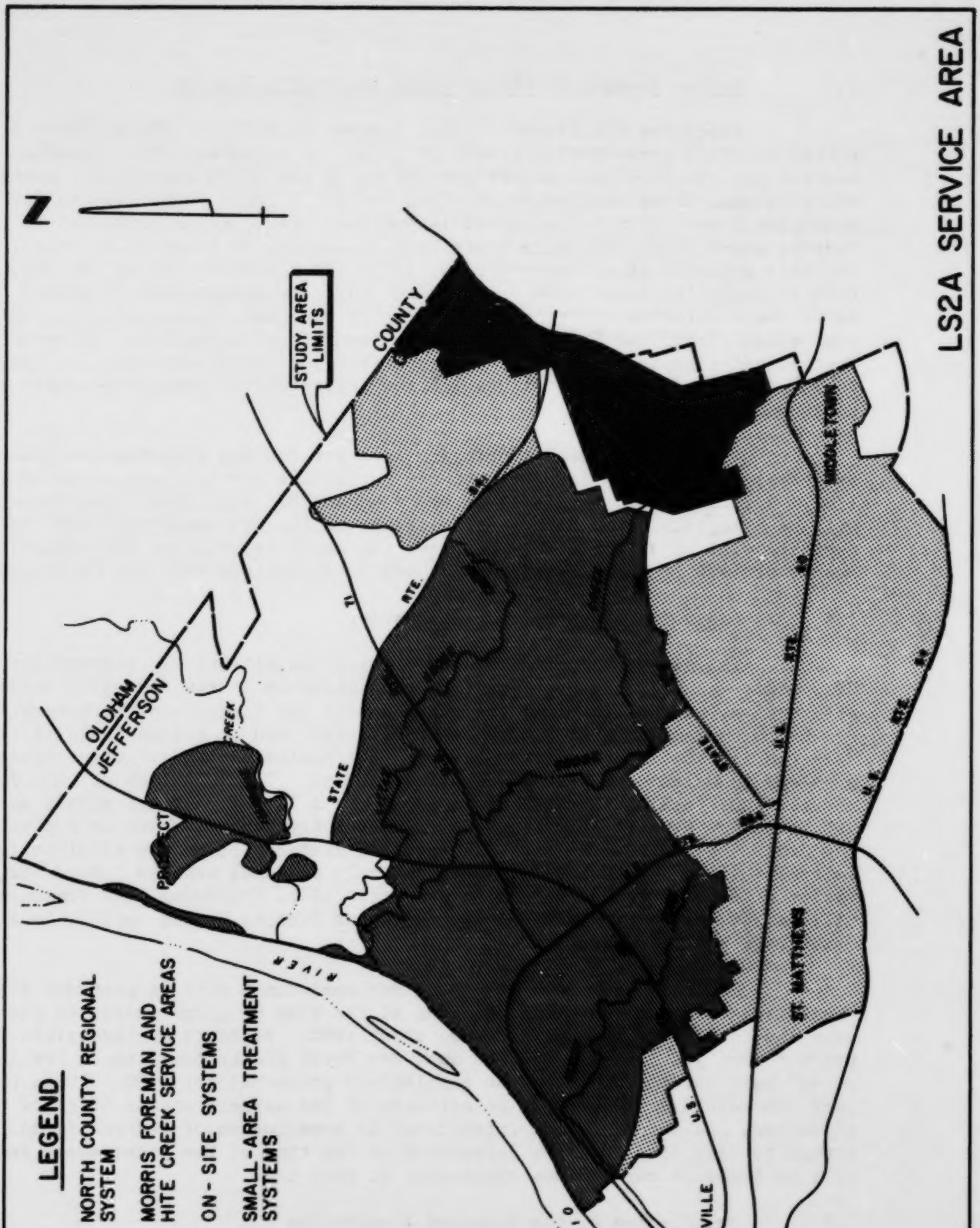
1.4 Basis for the Selected Alternative

The new construction grants regulations effectively eliminate the 201, LS2c, and LS1c alternatives from consideration as the federally funded alternative, because they all include capacity for future growth through 2000. Of the three remaining alternatives--LS2a, LS1a, and no action--LS2a is the selected alternative because it relieves the public health and water quality problems in North County to the greatest extent. The selection of LS2a does not preclude local authorities from providing a larger regional system such as LS2c or 201. However, facilities or capacity for future growth or for existing areas not included in the LS2a regional system will not be eligible for federal funding and must be provided entirely at local expense. Moreover, provision of federal funds for any future activities, including LS2a components, will be subject to the laws, regulations, and funding levels applicable at the time grant award is made.

Under current regulations, grant assistance will be provided for facilities to serve the needs existing at the time of grant award, or the needs existing in 1990 if the award occurs after 1990. Since it is impossible to predict when grant awards will be made for North County facilities, "existing needs" were considered to be the populations projected for 1990. These projections were made to provide an estimate of the maximum extent of grant assistance and should not be interpreted as commitments of federal funds. The actual funding level will be determined at the time of the grant award and will be based on regulations applicable at that time.

1.5 Description of the Selected Alternative

The proposed interceptor would serve most of the existing population in North County (Figure 3). Areas that would not be served include:


LEGEND
▨ NORTH COUNTY REGIONAL SYSTEM
▨ MORRIS FOREMAN AND HITE CREEK SERVICE AREAS
■ ON-SITE SYSTEMS
☐ SMALL-AREA TREATMENT SYSTEMS
N
STUDY AREA LIMITS
OLDHAM
JEFFERSON
COUNTY
CREEK
PROSPECT
STATE
RTE.
71
OHIO
RIVER
LOUISVILLE
U.S.
ST MATTHEWS
MIDDLETOWN

LS2A SERVICE AREA

FIGURE 3

1. Anchorage and Lake Louisvilla, which would remain on septic tanks;
2. The northeastern corner of the study area, most of which is presently served by the Hite Creek Wastewater Treatment Plant;
3. Four areas in the southeastern corner of the study area (Berrytown, Cross Creek, Running Creek, and Starview Estates), which have their own small treatment plants that lie in a different drainage basin from most of North County; and
4. Two institutions (Bellwood Presbyterian Home and the St. Thomas Orphanage) that are too far from the proposed service area to be sewered cost-effectively.

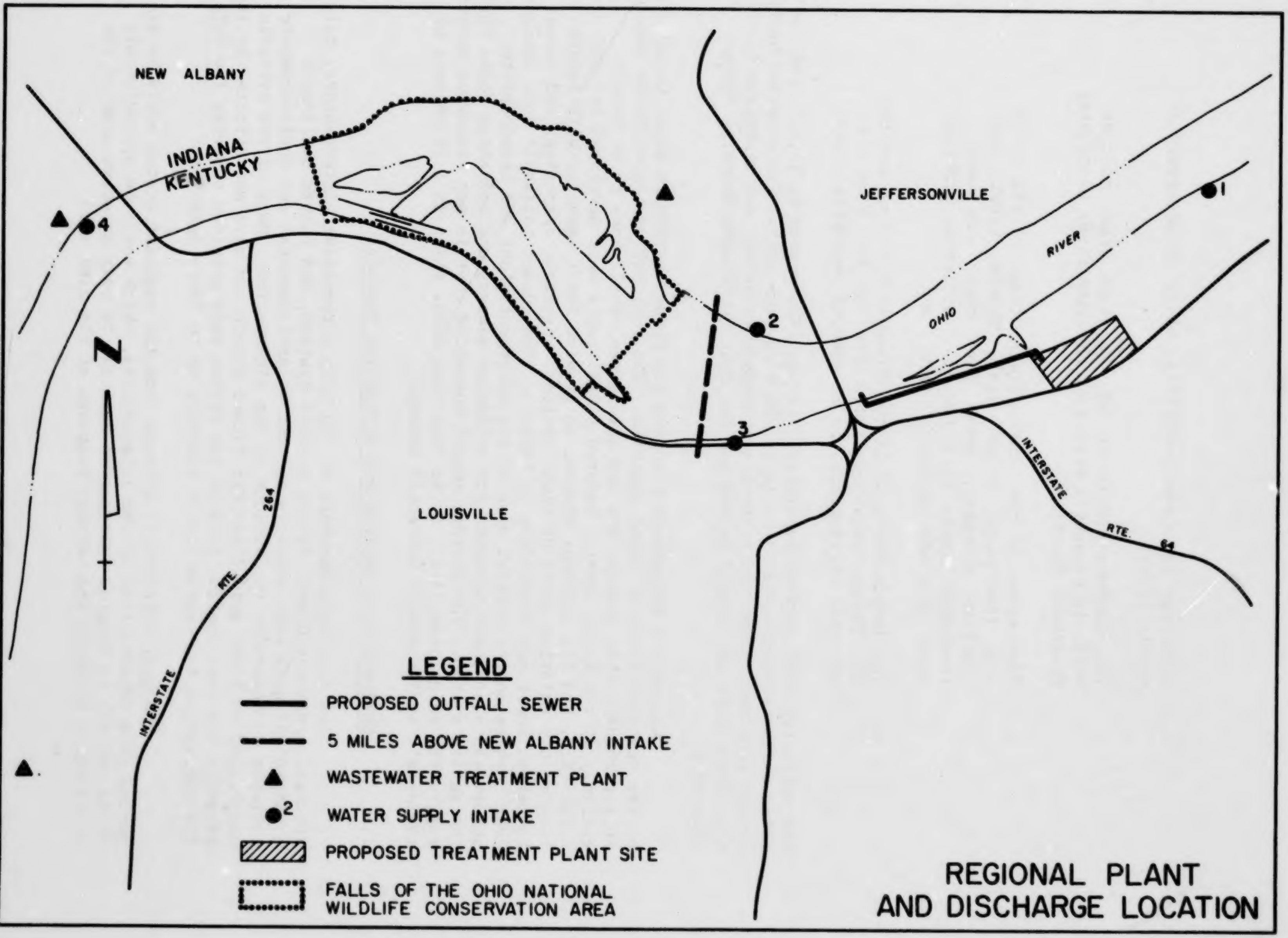
The estimated 1990 service population for the LS2a system is 54,600, and the total estimated wastewater flow is 25,000 m^3/d (6.5 mgd). The proposed North County treatment plant would provide secondary treatment and discharge to the Ohio River between Towhead Island and the John F. Kennedy Memorial Bridge (Figure 4).

Wastewater management planning for future growth in North County will be the responsibility of local agencies. The regional system could be enlarged to accommodate that growth, but the enlargement would have to be funded entirely at the local level. Updated (1983) costs were developed for the LS2a, LS2c, and 201 regional systems to provide local agencies with information on the relative costs of their options. Capital, operating, and annual household costs are summarized in Table 1. The annual household cost includes debt service on the capital cost of the treatment plant and interceptors, ammortized assessment payments for collector sewers, and operating costs for the entire system. The average annual household cost is not excessive according to EPA guidelines, i.e., it is less than $680, which is 1.75 percent of the area's median annual household income.

1.6 Environmental Impacts and Mitigative Measures

The various components of the LS2a alternative (interceptors, collectors, treatment plant, future on-site systems, and future small-area treatment plants) were compared against 41 environmental and socio-economic criteria to determine the impacts of the alternative. Many of the criteria were based on local guidelines for future growth and were not affected by the proposed regional system, because the system only provides capacity for existing population and leaves future planning up to local agencies.

The most significant effects from the regional system would be expected from construction of the interceptors, which would be approximately 64 km (40 mi) in length. Mitigative measures to help preserve some of the significant historic and natural features of the area are:


NEW ALBANY
INDIANA
KENTUCKY
JEFFERSONVILLE
OHIO
RIVER
LOUISVILLE
INTERSTATE
RTE.
264
INTERSTATE
RTE.
64
1
2
3
4
N
LEGEND
PROPOSED OUTFALL SEWER
5 MILES ABOVE NEW ALBANY INTAKE
WASTEWATER TREATMENT PLANT
WATER SUPPLY INTAKE
PROPOSED TREATMENT PLANT SITE
FALLS OF THE OHIO NATIONAL WILDLIFE CONSERVATION AREA

REGIONAL PLANT AND DISCHARGE LOCATION

FIGURE 4

TABLE 1. COST SUMMARY
(1983 Dollars)

	LS2a	LS2c	201
Capital Costs			
Treatment Plant	$ 19,000,000	$ 21,000,000	$ 25,000,000
Interceptors	31,000,000	34,000,000	43,000,000
Collectors	63,000,000	76,000,000	99,000,000
Total	$113,000,000	$131,000,000	$167,000,000
Federal Grant (at 55% of Allowable Costs)	$ 26,000,000	$ 26,000,000	$ 26,000,000
Local Share	87,000,000	105,000,000	141,000,000
Average Annual Operating Costs			
Treatment Plant	$ 640,000	$ 660,000	$ 710,000
Interceptors & Collectors	190,000	210,000	260,000
Equipment Replacement Fund	220,000	250,000	270,000
Total	$ 1,050,000	$ 1,120,000	$ 1,240,000
Average Annual Household Costs			
Debt Payment			
0% Federal Funding	$ 220	$ 230	$ 250
55% Federal Funding	100	120	150
Assessment	210	260	370
Operating Costs	50	50	50
Total			
0% Federal Funding	$ 480	$ 540	$ 670
55% Federal Funding	$ 360	$ 430	$ 570

Note: These costs have been updated to 1983 dollars and are, therefore, different from the costs of the alternatives presented in Sections 1.2.2 and 1.2.4, which are given in 1981 dollars.

Archaeological Sites

1. Require certification from State Archaeologist and State Historic Preservation Officer that interceptor construction will not affect known sites.

2. Require archaeological survey of certain interceptor segments.

3. Require notification of findings to EPA, State Historic Preservation Officer, and State Archaeologist.

Historic Sites

1. Require certification from State Historic Preservation Officer that interceptor construction will not affect known sites.

2. Recommend consultation with State Historic Preservation Officer about construction of certain collector systems in neighborhoods with known sites.

Floodplains

Recommend minimizing amount of floodplain lost to treatment plant and pumping station sites.

Wetlands

Require permit from U.S. Army Corps of Engineers for construction in Muddy Forks wetland, or statement from Corps that permit is not necessary. Require consultation with the U.S. Fish and Wildlife Service regarding interceptor construction.

Navigable Waters

Require permits from U.S. Army Corps of Engineers for stream crossings or the discharge of dredge and fill material to streams within the Corps jurisdiction.

Environmentally Significant Agricultural Lands

Recommend that interceptor corridor in Ohio River floodplain be returned to pre-construction condition so that productive use may continue.

Rare and Endangered Species

Require consultation with Kentucky Nature Preserves Commission before constructing certain interceptor segments that pass through areas with sightings of plants or animals on state list of rare and endangered species.

Natural Areas

1. Require consultation with U.S. Fish and Wildlife Service regarding interceptor construction in the Caperton swamp forest and bottomland hardwood forests on the floodplain terraces of the Ohio River.

2. Require consultation with Kentucky Nature Preserves Commission about interceptor construction in areas of Muddy Forks wetlands and lower Goose Creek valley.

3. Recommend specific mitigative measures for certain significant natural features in stream valleys.

Parks

Require consultation with agencies operating certain parks through which the interceptor will run.

2. BACKGROUND AND PURPOSE OF THE EIS

2.1 Background and History of the EIS

In recognition of the limitations placed on orderly development without comprehensive wastewater management planning, local agencies have conducted two planning studies: the 1964 Master Plan and 1974 Water Quality Management Plan (the 201 Plan).

The 1964 Master Plan proposed eliminating on-site disposal systems and small-area wastewater treatment plants in all areas developed to urban or suburban population densities or developed for industrial use. Two major treatment plants in addition to the existing Morris Forman (then named Fort Southworth) plant were proposed. One was to serve the North County area, with an estimated population in 2010 of 186,000 and no industry; the other was to serve the "West County" area, the Pond Creek watershed, the South Fork of Beargrass Creek outside the city limits of Louisville, and certain small areas within the city. Several other small treatment plants were also proposed, including one on Hite Creek in the North County area and at least three on Floyds Fork.

In 1973 the Kentuckiana Regional Planning and Development Agency initiated the preparation of a facility plan under Section 201 of the 1972 Federal Water Pollution Control Act (Public Law 92-500). The 201 Plan generally recommended implementation of the 1964 Master Plan: the three-plant regional system with two interim facilities--Hite Creek and Jeffersontown--that would be phased out by the end of the planning period.

In May 1975, following review of the 201 Plan by the Kentucky Department for Natural Resources and Environmental Protection and EPA, it was determined that the Kentucky portion of the Plan was substantially complete. An Environmental Impact Appraisal was prepared by EPA documenting the decision that an EIS was not required. This determination allowed EPA Region IV to commit federal construction grant funds to several design and construction projects in Jefferson County.

Following the 1975 approval of the 201 Plan by EPA, MSD entered a phase of design and construction activities in the West County portion of Jefferson County. In March 1977, the Southwest Jefferson County Homeowners Association requested an EIS on the 201 Plan. EPA reviewed the concerns expressed by the citizens' group and determined that sufficient cause existed to prepare an EIS on the Mill Creek portion of the West County area. A Notice of Intent to prepare an EIS was issued by EPA in September 1977. A public scoping meeting was held in February 1978, to allow citizens to present views and give input to the EIS process. During this scoping process, and in subse-

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quent reviews of the adequacy of wastewater management planning carried out for the 201 Plan, EPA determined that an EIS would also be necessary for the North County portion of Jefferson County. A Notice of Intent was issued on June 20, 1979, and a public scoping meeting was held at the Westport Road High School on July 25, 1979. The EIS planning period was defined as 1980-2000.

2.2 Purpose of the EIS

Failing septic tanks and improperly operated treatment plants have created public health and water quality problems in North County. The purpose of this EIS is to determine the most cost-effective, environmentally sound approach to alleviating those problems. The complete regional sewer proposed by the 201 Plan will be considered as one alternative solution. Other alternatives will include less extensive regional systems and no regional system.

The EIS study has been documented in a series of four reports, including (1) a review of wastewater management planning in the area and an inventory of the present natural and cultural environment (U.S. EPA 1980b); (2) the development of alternatives for wastewater management (U.S. EPA 1981a); (3) the evaluation of the costs, benefits, and other impacts of the alternatives (U.S. EPA 1981b); and (4) a description of the preferred alternative (U.S. EPA 1983b). These reports were published as draft documents and distributed to the EIS Review Committee and two local libraries (Eline Branch and Northeast Branch). The Draft EIS incorporating these four reports and identifying the preferred alternative was publiched in December 1983.

A public hearing was held on February 7, 1984, at the Ballard High School cafetorium, and oral comments were received on the Draft EIS. Written comments were to be submitted by February 29, 1984.

The purposes of this document are to briefly summarize the EIS (Executive Summary), re-state EPA's selected action (Chapter 3), provide corrections and revisions to the Draft EIS (Chapter 4), and respond to the comments on the Draft EIS (Chapter 5).

3. THE SELECTED ALTERNATIVE

3.1 Description of the Selected Alternative

3.1.1 Existing Needs

The 1981 amendments to the Clean Water Act do not allow federal funding of treatment system capacity for future growth. Funding of future projects, therefore, will be based on the needs existing at the time the grant is awarded. If the grant occurs after 1990, the award will be based on the needs existing in 1990. In updating the description of the LS2a regional system, "existing needs" were based on the populations projected for 1990. In essence, this represents the largest federally funded system possible under existing laws. Since the LS2a regional system considered in the alternatives evaluation was based on 1980 populations, the updated LS2a system is a larger system than that evaluated previously. The flows and capacities used in this chapter are for current planning purposes only--to provide an estimate of what proportion of system cost may be eligible for grant funding. Actual future grants, of course, will depend on actual needs at the time of grant award and on the laws and regulations applicable at that time.

The extent of the proposed LS2a service area is shown in Figure 3. Table 2 lists the treatment system proposed for each existing subarea under the selected alternative. All but seven of the existing treatment plants would be eliminated by the LS2a system. Extending the regional interceptors to those seven plants would not be cost-effective. The North County area has 32 unsewered communities. Only two of these--Anchorage and Lake Louisvilla--would not be sewered and connected to the regional system.

Regional Conveyance System

The selected alternative proposes a regional sewer system to serve all existing (1990) development in the Muddy Fork basin, the Woodside Creek basin, most of the Goose Creek basin, the Little Goose Creek basin, and the Harrods Creek basin (Figure 5). The proposed interceptors total 64 km (40 mi) in length, of which 2 km (1.3 mi) of the Muddy Fork interceptor are already in place. Interceptor pipe sizes range from 8 in. (20 cm) to 48 in. (122 cm) in diameter. A 1.2-km (0.7-mi) long, 20-in. (51-cm) diameter force main and a 0.22-m^3/s (5-mgd) pumping station are required south of Goose Creek to prevent the trunk interceptor along the Ohio River from becoming too deep.

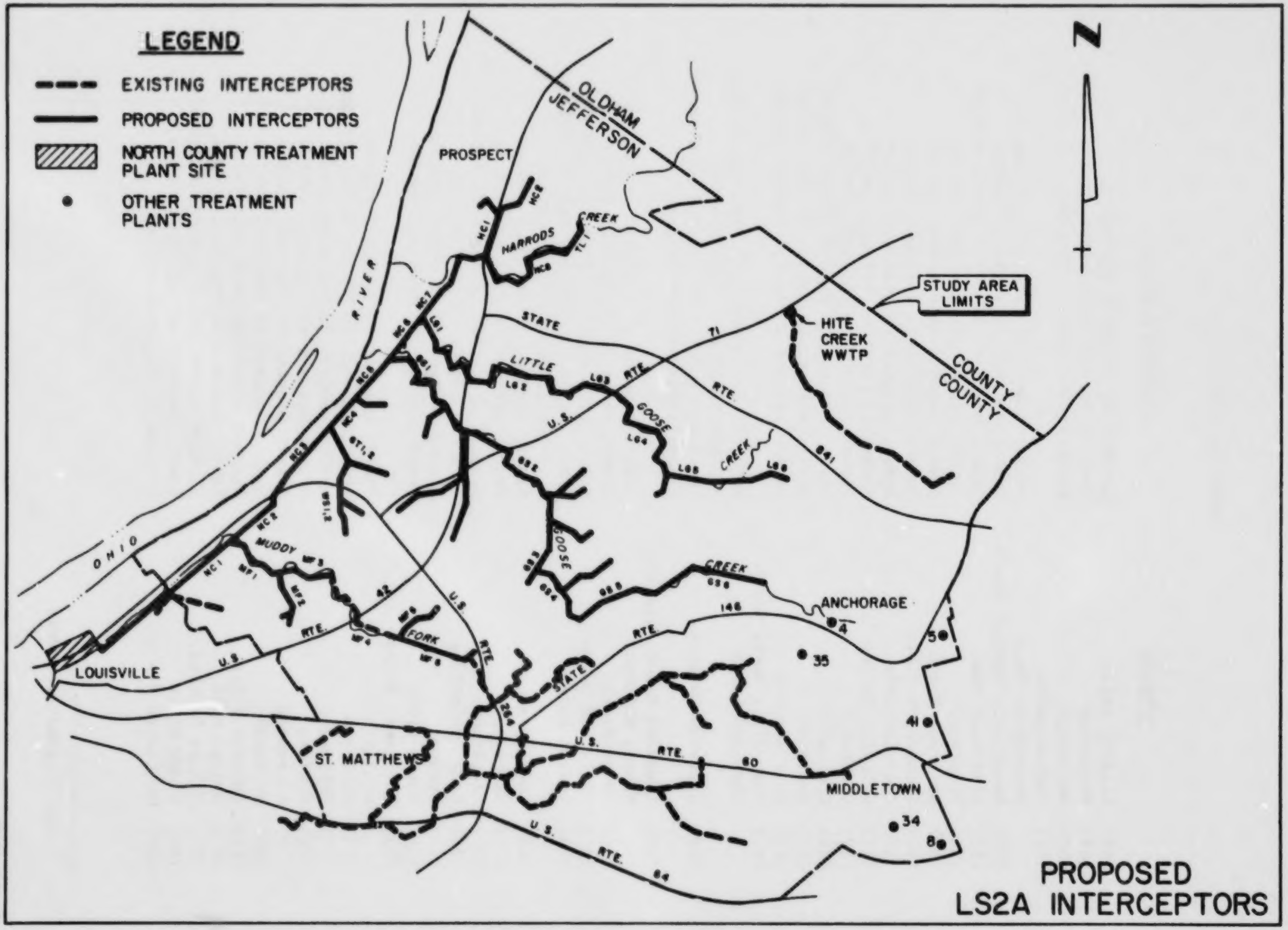
TABLE 2. TREATMENT SYSTEMS FOR EXISTING SUBAREAS UNDER LS2A

	Subarea	Treatment System
(1)	Bancroft	Connect to regional system
(2)	Barbour Manor	Connect to regional system
(3)	Beha Cleaners	Connect to Morris Forman system
(4)	Bellwood Presbyterian Home	Upgrade or replace 20-m^3/d (0.006-mgd) WWTP
(5)	Berrytown	Upgrade 240-m^3/d (0.064-mgd) WWTP
(6)	Brownsboro Meadows	Connect to regional system
(7)	Central State Hospital	Connect to regional system
(8)	Cross Creek	Upgrade 650-m^3/d (0.17-mgd) WWTP
(9)	Douglass Hills	Connect to Morris Forman system
(10)	Dove Creek	Connect to regional system
(11)	Falls Creek	Connect to regional system
(12)	Foxboro	Connect to Morris Forman system
(13)	Glenview Acres	Connect to regional system
(14)	Glenview Bluff	Connect to regional system
(15)	Glenview Hills	Connect to regional system
(16)	Glenview Woods	Connect to regional system
(17)	Green Spring	Connect to regional system
(18)	Hite Creek	Continue operation; no upgrading necessary; may be expanded by MSD
(19)	Holiday Inn	Connect to regional system
(20)	Holiday Manor	Connect to regional system
(21)	Hounz Lane	Connect to regional system
(22)	Hunting Creek North	Connect to regional system
(23)	Hunting Creek South	Connect to regional system
(24)	Ken-Carla	Connect to regional system
(25)	Kentucky Childrens Home	Connect to regional system
(26)	Louisville Country Club	Connect to regional system
(27)	Muddy Fork	Connect to regional system
(28)	Murray Hills	Connect to regional system
(29)	New Market	Connect to regional system
(30)	Norton Elementary School	Connect to regional system
(31)	Plantation	Connect to regional system
(32)	Plantation Hills	Connect to regional system
(33)	Rolling Hills	Connect to regional system
(34)	Running Creek	Upgrade 110-m^3/d (0.028-mgd) WWTP
(35)	St. Thomas Orphanage	Replace 11-m^3/d (0.003-mgd) WWTP
(36)	Shadow Wood	Connect to regional system
(37)	Spring Valley Estates	Connect to regional system
(38)	Springdale	Connect to regional system
(39)	Standard Country Club	Connect to regional system
(40)	Standard Oil Co.	Connect to regional system
(41)	Starview Estates	Upgrade 380-m^3/d (0.10-mgd) WWTP
(42)	Thornhill	Connect to regional system
(43)	Timberlake	Connect to regional system
(44)	Walden School	Connect to regional system
(45)	West Creek Apartments	Connect to regional system
(46)	Westport High School	Connect to regional system
(47)	Westport Services Co.	Connect to regional system

TABLE 2. (Cont.)

Subarea		Treatment System
(48)	Winding Falls	Connect to regional system
(49)	Woodstone	Connect to regional system
(50)	Anchorage	Rehabilitate on-site systems
(51)	Barbourmeade, Brownsboro Farm	Sewer; connect to regional system
(52)	Beachland, Mayfair Beach	Sewer; connect to regional system
(53)	Blairwood Road	Sewer; connect to Morris Forman system
(54)	Briarwood	Sewer; connect to regional system
(55)	Brittany Woods	Sewer; connect to regional system
(56)	Brownsboro Vista	Sewer; connect to regional system
(57)	Cherokee Unit	Sewer; connect to regional system
(58)	Colonial Terrace	Sewer; connect to regional system
(59)	Creekside	Sewer; connect to regional system
(60)	Crossgate	Sewer; connect to Morris Forman system
(61)	Eastview	Sewer; connect to Morris Forman system
(62)	Fair Meadows	Sewer; connect to Morris Forman system
(63)	Glen Hill, Regal Hills Glenwood Acres	Sewer(a) and connect to regional system; or rehabilitate on-site systems
(64)	Glenview Estates	Sewer and connect to regional system; or rehabilitate on-site systems
(65)	Limewood Manor, Glenview Manor, Glenwood	Sewer; connect to regional system
(66)	Goose Creek	Sewer; connect to regional system
(67)	Hills and Dales	Sewer(a); connect to regional system
(68)	Indian Hills	Sewer(a) and connect to regional system; or rehabilitate on-site systems
(69)	Juniper Beach	Sewer; connect to regional system
(70)	Keeneland	Sewer; connect to regional system
(71)	Kingswood	Sewer(a); connect to regional system
(72)	Lake Louisvilla	Continue use of on-site systems
(73)	Lyndon	Already connected to Morris Forman
(74)	Manor Creek	Sewer; connect to regional system
(75)	Moorland, Whipps Millgate	Sewer; connect to regional system
(76)	Parkside	Sewer; connect to Morris Forman system
(77)	Robinwood	Sewer; connect to regional system
(78)	Riviera	Sewer; connect to regional system
(79)	Riverwood	Sewer; connect to regional system
(80)	Walbrook	Sewer; connect to regional system
(81)	Warwick Villa	Already connected to Morris Forman
(82)	Whipps Mill	Sewer; connect to regional system
(83)	Wilder Estates	Already connected to regional system
(84)	Windy Hills	Sewer; connect to regional system
(85)	Netherton Place	Connect to regional system

(a) Small-diameter sewers


LEGEND
EXISTING INTERCEPTORS
PROPOSED INTERCEPTORS
NORTH COUNTY TREATMENT PLANT SITE
OTHER TREATMENT PLANTS
N
OLDHAM
JEFFERSON
COUNTY
COUNTY
STUDY AREA LIMITS
PROSPECT
HARRODS
CREEK
HITE CREEK WWTP
OHIO
RIVER
STATE
RTE.
71
LITTLE
GOOSE
CREEK
841
U.S.
RTE.
42
GOOSE
CREEK
ANCHORAGE
146
MUDDY
FORK
LOUISVILLE
STATE
264
ST. MATTHEWS
60
MIDDLETOWN
64
4
5
35
41
34
8
NC1
NC2
NC3
NC4
NC5
NC6
NC7
NC8
TL1
LG1
LG2
LG3
LG4
LG5
LG6
GG1
GG2
GG3
GG4
GG5
GG6
GT1,2
WS1,2
MF1
MF2
MF3
MF4
MF5
MF6

PROPOSED
LS2A INTERCEPTORS

FIGURE 5

In addition to the regional interceptors, collection systems would have to be installed in the existing unsewered areas that will connect to the regional system. These collectors will generally be traditional 8- and 10-in. (20- and 25-cm) gravity sewers; but small-diameter sewers (6-in.[15-cm]) may be less costly in several subareas, as indicated in Table 2. An estimated 123 km (77 mi) of collectors already exist in sewered areas, and a projected 103 km (64 mi) of collectors would have to be placed in unsewered areas.

The estimated cost, in 1983 dollars, of the regional conveyance system is $94 million, of which $31 million is for the interceptor system and $63 million is for the collector system.

Regional Treatment Plant

Discharge Limitations

The selected alternative includes the construction of a 0.28-m^3/s (6.5-mgd) North County Wastewater Treatment Plant that would discharge into the Ohio River. The discharge permit for this discharge would be written by the Kentucky Natural Resources and Environmental Protection Cabinet and reviewed by the Ohio River Valley Water Sanitation Commission.

At this time, the consensus of the regulatory agencies is that the effluent limitations for a discharge into the Ohio River from a North County plant will be based on secondary treatment. EPA will only fund facilities for treatment beyond secondary if a water quality model shows that advanced treatment would be needed to meet water quality standards. Effluent limitations for secondary treatment are presently defined in EPA regulations as:

Biochemical oxygen demand, 5-day (BOD)	Maximum effluent concentration of 30 mg/L as a monthly mean and a minimum reduction of 85% in the influent concentration
Suspended solids	Same as for BOD
pH	6.0 to 9.0
Fecal coliform bacteria	Maximum effluent density of 200 organisms per 100 mL as a monthly geometric mean and 400 organisms per 100 mL as a weekly geometric mean

Prior to design of the North County plant, the proposed discharge will have to be re-evaluated on the basis of the regulations applicable at that time to see what the effluent limitations will be.

Treatment Process

Preliminary analyses in the alternatives evaluation stage showed conventional activated sludge to be the most cost-effective liquid treatment process and aerobic digestion to be the most cost-effective sludge treatment process for North County. MSD has a study underway to determine an areawide solution for sludge management, including all of its treatment plants. The results of that study may affect the selection of a sludge treatment process for North County. For estimating costs at this point the sludge was assumed to be digested and dewatered at North County and then trucked to the Morris Forman treatment plant for disposal. Before final design of a North County plant, liquid and sludge treatment alternatives should be re-evaluated to determine the most cost-effective process at that time. The unit processes used for costing the proposed North County Wastewater Treatment Plant were: preliminary treatment, influent pumping, circular primary clarifiers, conventional activated sludge, circular secondary clarifiers, chlorination, effluent pumping, sludge thickening, aerobic sludge digestion, and belt press dewatering (Figure 6). The estimated cost, in 1983 dollars, for the regional treatment plant is $19 million.

Plant Site and Discharge Location

The proposed treatment plant site (see Figure 4) consists of approximately 40 ha (100 ac) located between Interstate 71 and the Ohio River in the vicinity of Bandman Park and the State Railway Museum. It is divided into three nearly equal sections by a railroad spur and a public road. Preliminary design indicates that approximately 6 ha (15 ac) would be required for all of the process civil works, equipment, buildings, service roads, and levee. Thus any of the one-third sections could entirely accommodate the treatment plant.

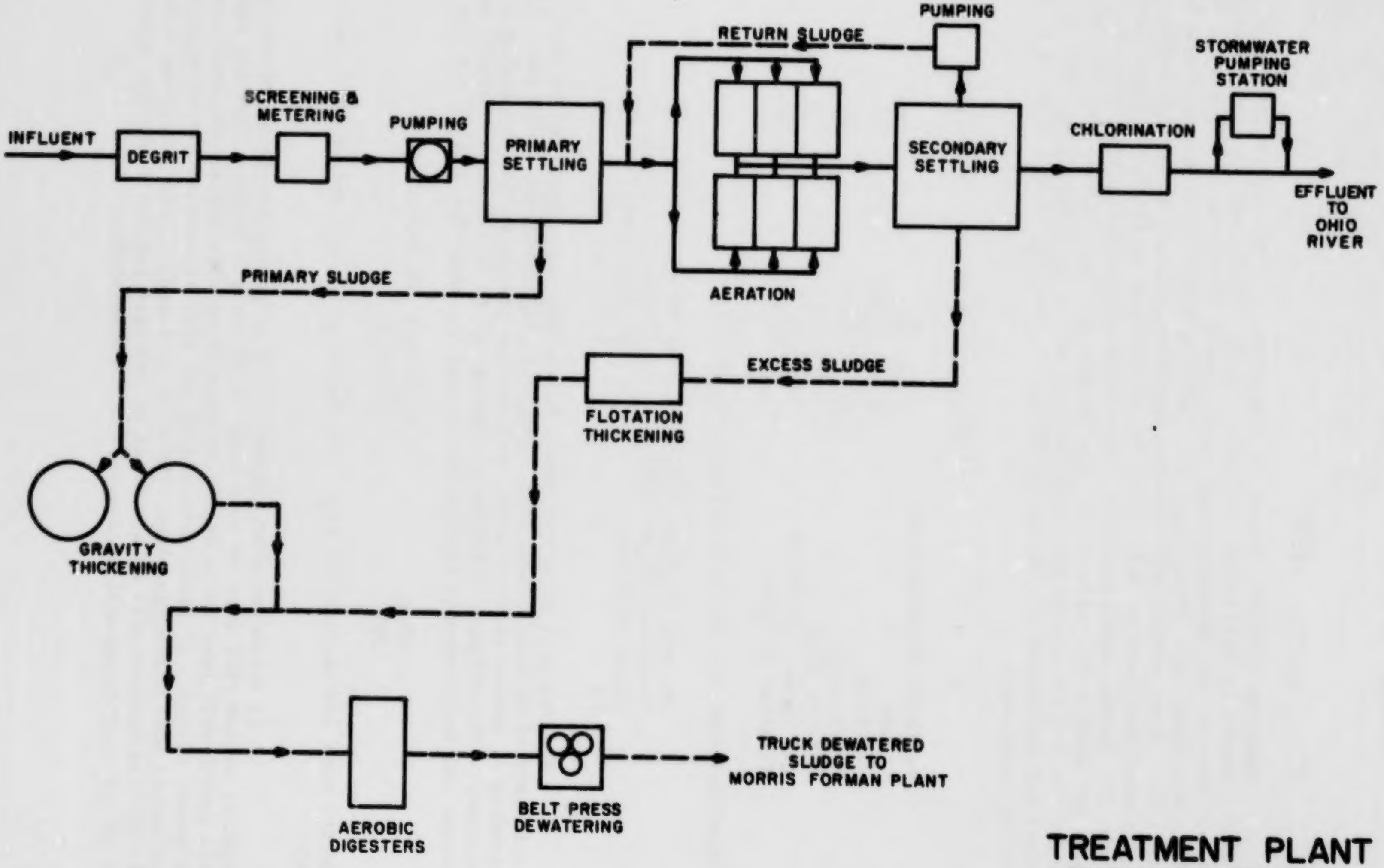
The selected alternative includes a shoreline outfall below Towhead Island for discharge from the North County plant (see Figure 4). At river mile 603, the discharge will be 2.4 miles downstream of the Louisville Water Company's intake at Zorn Avenue (number 1 on Figure 4), the main water supply source for the Louisville area. The average withdrawal at Zorn Avenue is 5.3 m^3/s (120 mgd). The North County discharge will be upstream of three water intakes (numbers are keyed to Figure 4):

2. Colgate Palmolive industrial water intake (RM 603.7); cooling water and boiler feed water is withdrawn intermittently at a rate of 0.07 m^3/s (1.6 mgd).

3. Louisville Gas and Electric Company intake for the Waterside Avenue Electricity Generating Station (RM 603.7); cooling water is withdrawn continuously at a rate of 0.02 m^3/s (0.4 mgd).

4. Indiana Cities Water Corporation municipal water intake at New Albany, Indiana (RM 608.9); average withdrawal is 0.15 m^3/s (3.5 mgd).

The proposed discharge location satisfies the policy of the Kentucky Natural Resources and Environmental Protection Cabinet to refuse permits for wastewater discharges that would be less than 8 km (5 mi) above a municipal water supply intake.


INFLUENT
DEGRIT
SCREENING & METERING
PUMPING
PRIMARY SETTLING
RETURN SLUDGE
PUMPING
AERATION
SECONDARY SETTLING
CHLORINATION
STORMWATER PUMPING STATION
EFFLUENT TO OHIO RIVER
PRIMARY SLUDGE
EXCESS SLUDGE
FLOTATION THICKENING
GRAVITY THICKENING
AEROBIC DIGESTERS
BELT PRESS DEWATERING
TRUCK DEWATERED SLUDGE TO MORRIS FORMAN PLANT

TREATMENT PLANT FLOW SCHEMATIC

FIGURE 6

Other Treatment Plants

When the regional system is completed, all but six of the areas currently served by small-area treatment plants will connect to the regional system. Four of the remaining small-area plants discharge to the Floyds Fork basin: Berrytown (5), Cross Creek (8), Running Creek (34), and Starview Estates (41). These plants will require upgrading to meet discharge standards. The Bellwood Presbyterian Home plant (4) discharges to the Goose Creek basin, and the St. Thomas Orphanage plant (35) discharges to Beargrass Creek; both plants may need to be replaced by 1990 because of their ages. The effluent limitations for the six plants were determined by the Kentucky Natural Resources and Environmental Protection Cabinet. The limitations that vary from plant to plant are:

	Flow, gal/d (m^3/d)	BOD, mg/L
Bellwood Presbyterian Home	6,000 (23)	20
Berrytown	75,000 (280)	30
Cross Creek	172,000 (650)	25
Running Creek	110,000 (420)	10
St. Thomas Orphanage	3,000 (11)	30
Starview Estates	100,000 (380)	30

Limitations that are the same for all six plants are:

Ammonia nitrogen (NH_3N)	4 mg/L
Dissolved oxygen (DO)	7 mg/L
Fecal coliforms	200 organisms/100 mL
pH	6.0 - 9.0

The regional treatment plant for subarea 18 discharges to Hite Creek, a tributary of Harrods Creek; this plant will also continue operation. No upgrading is needed at Hite Creek, but MSD has indicated that expansion may be necessary. The effluent limitations determined by the Kentucky Natural Resources and Environmental Protection Cabinet for the Hite Creek plant are

Flow	4.9 mgd (18,500 m^3/d),
BOD	10 mg/L,

and the same limitations for NH_3N, DO, fecal coliforms, and pH that are listed above.

It is projected that the North County population to be served by the regional system will grow by more than 18,000 people between 1980 and 1990. This growth will have to be served by interim on-site systems or small-area treatment plants. If small-area plants are used to service all of this growth, the plants will discharge about 7200 m^3/d (1.9 mgd) to the receiving streams. The interim systems will be abandoned or salvaged and their service areas connected to the regional system when it is completed.

The effluent limitations for these new small-area treatment plants will depend on the effluent discharge rate and the discharge location. For the alternatives evaluation, water quality model analyses were run by the Kentucky Natural Resources and Environmental Protection Cabinet to determine discharge limitations for North County. These analyses indicated effluent limitations may be as restrictive as 10 mg/L BOD, 4 mg/L NH_3N, and 7 mg/L DO for some plants. All plants would have to provide secondary treatment (30 mg/L BOD) as a minimum.

On-Site Systems

Under the selected alternative two of the subareas currently served by on-site systems will retain those systems. Aerobic tanks and sand mounds are recommended for Lake Louisvilla (72). Rehabilitation of failed systems or construction of community systems is recommended for Anchorage (50).

A complete evaluation of all possible causes of system failure is the key to successfully correcting malfunctions. The troubleshooting process should look at all components of the treatment and disposal facilities. Corrective action may be as simple as making repairs to the septic tank or as complex as installing a completely new system. For further information, see the draft Preferred Alternatives Report (U.S. EPA 1983b) and the EPA design manual for on-site systems (U.S. EPA 1980a).

3.1.2 Future Needs

For the purposes of this report, future needs arise from the growth occurring between 1990 and 2000--the time between the construction of the LS2a system and the end of the EIS planning period. Under the selected alternative, LS2a, conveyance and treatment capacity will be provided for existing (1990) population only, so no future needs would be filled by the regional system. The system actually constructed, however, may provide future capacity (such as the LS2c alternative) and extend to more areas in North County (such as the 201 alternative) if the capacity to serve future population is funded locally. Further information on the LS2c and 201 alternatives can be found in the Draft EIS (U.S. EPA 1983a).

The selected alternative assumes future growth (beyond 1990) will connect to small-area treatment plants for wastewater management. This growth would occur in the area shown for small-area plants in Figure 3 and on undeveloped land within the regional system service area. Population growth in North County between 1990 and 2000 is expected to be 12,300. If small-area plants are built to serve all of this growth, discharges to area streams would increase by 4,900 m^3/d (1.3 mgd). Effluent limitations for these discharges will be determined by the Kentucky Natural Resources and Environmental Protection Cabinet.

3.2 Environmental and Socio-Economic Impacts and Mitigation

A list of 41 criteria for evaluating impacts was developed after a review of federal regulations and the Louisville and Jefferson County Comprehensive Plan (LJCPC 1979). Eighteen of these criteria were affected in some way by the regional system; the affected criteria and possible mitigative measures are summarized in Tables 3 and 4. For the locations of the interceptor segments mentioned in this section, see Figure 5. More specific information on the resources, impacts, and mitigative measures summarized in this section are also available in Section 5.4 of the Draft EIS.

TABLE 3. SUMMARY OF CRITERIA AFFECTED BY THE SELECTED ALTERNATIVE

Criteria	Justification
6. Promotes multiple use of community facilities (LJCPC 1979 ; EPA Construction Grant Guidelines)	Criterion affected because sewer easements can be used for linear recreation facilities and trails, or they cross existing land uses which continue being utilized after placement of the sewer. No need for mitigation.
8. Promotes wise energy use (LJCPC 1979)	Criterion affected because of energy needed to construct system and the existing energy used for waste disposal compared to efficient energy use at a regional plant. Mitigation: Incorporate energy-saving measures into the design of the system.
10. Reduced water pollution, erosion, sedimentation (LJCPC 1979)	Criterion affected because of potential for erosion and sedimentation during construction and because existing sources of water pollution will be removed from creeks. A new source of pollution to the Ohio River will be added. Mitigation: Best management practices during construction to control erosion and sedimentation; proper operation of regional treatment plant.
12. Avoids impacts to noise-sensitive land uses (LJCPC 1979)	Criterion affected because the interceptors and collectors will be constructed through such noise-sensitive land uses as residential areas. After construction there will be no noise impacts if facilities are operated properly. Mitigation: Use temporary noise barriers around jack hammers and heavy machinery; make sure all equipment has mufflers; limit construction to normal working hours.
28. Preserves unique natural areas (LJCPC 1979)	Criterion affected because virtually the entire interceptor system runs through forested stream valleys that are the last remaining natural areas in North County. Mitigation: Use already cleared areas where possible; minimize vegetation removal.

TABLE 3. (Cont.)

Criteria	Justification
30. Avoids excessive cost to homeowner (EPA Construction Grant Guidelines)	Criterion affected because the average annual household payment, including debt service and operating cost, will be $360 per year. EPA criteria define an expensive alternative as one that exceeds 1.75% of median family income. The median household income in North County is $39,100 (updated to 1983 dollars), so an "expensive" project would have an annual payment greater than $680 per household. Mitigation: None--unavoidable economic impact.
31. Avoids disrupting community services and facilities (EPA Construction Grant Guidelines)	Criterion affected because of disruption of normal transportation patterns during construction of sewer lines. Mitigation: carefully planned traffic and pedestrian circulation control and phased closing of local streets with adequate detours.

TABLE 4. SUMMARY OF CRITERIA AFFECTED ONLY BY CERTAIN COMPONENTS OF THE SELECTED ALTERNATIVE

Criteria	System Component	Effects
4. Preserves neighborhoods and housing (LJCPC 1979)	Interceptor segments MF-2, MF-3, MF-5, MF-5, MF-6, WS-2, GS-2, GS-5, GS-6, HC-1, LG-4, LG-5, NC-2, NC-6; collectors in existing unsewered areas	These sewer segments will relieve urbanized areas experiencing a high septic tank failure rate. If septic tank problems are not corrected, water quality and public health problems will persist and could adversely affect home values and neighborhood character. Mitigation: None required.
5. Preserves historic structures (LJCPC 1979; National Historic Preservation Act; Executive Order 11593)	Interceptor segments MF-5, MF-6, NC-3, NC-4, NC-6, NC-7, GB-1, GT-1, GS-2, GS-5, PL-1, LG-1; collector systems in subareas 64, 68, 78, 79, 84	These sewer segments will pass near buildings on or nominated to the National Register. Mitigation: See page 34.
32. Avoids adversely affecting state-designated endangered species (Kentucky Nature Preserves Commission)	Interceptor segments MF-4, MF-1, GS-1, GS-2, GS-3, NC-2, NC-8	These interceptor segments will pass through or near areas of sightings of seven animal species and one plant species on the Kentucky Nature Preserves Commission's list of endangered species. Mitigation: See page 36.
33. Avoids adversely affecting federally listed endangered species (Endangered Species Act)	Interceptor segment GS-3	This interceptor segment passes through an area where an endangered species (peregrine falcon) has been sighted. Mitigation: None required because no habitat area established.

TABLE 4. (Cont.)

Criteria	System Component	Effects
	Interceptor segments MF-1, MF-2, MF-3, GC-1, GC-2	These segments pass through forested areas with suitable habitat for the endangered Indiana bat; no sightings of the bat are reported from the study area, however. Mitigation: See page 36.
34. Avoids adversely affecting aquatic habitat (Fish and Wildlife Coordination Act)	Interceptor segments MF-1, MF-2, MF-3, GS-1, GS-2, GS-3, LG-1, LG-2, LG-3, NC-2, NC-5, NC-6, HC-1	These interceptor segments run along stream segments of local habitat importance. Mitigation: See page 36.
	Small-area treatment plants	Those existing plants that continue in operation or future plants that may be built will discharge pollutants that may reduce the habitat value of the small creeks. Mitigation: Strong enforcement of discharge permits to encourage good operation.
35. Avoids adversely affecting terrestrial habitats (Fish and Wildlife Coordination Act)	Interceptor segments MF-1, MF-2, MF-3, MF-4, MF-5, GS-1, GS-2, GS-3, GS-5, LG-1, LG-2, NC-1, NC-2, NC-3, NC-4, NC-5, NC-6, NC-7 NC-8, HC-1	These interceptor segments run through stream valleys of local habitat importance. Mitigation: See page 36.
36. Avoids adversely affecting recreational resources (EPA Construction Grant Guidelines)	Interceptor segments MF-1, MF-4, GS-1, GS-2, GS-3, GS-5, LG-1, LG-2, LG-3, LG-4, NC-6, NC-7, NC-8, HC-1	These interceptor segments pass through forested areas of high potential for passive recreational use. Mitigation: See page 37.
	Interceptor segment GS-6	This segment passes through a county park and a state park. Mitigation: See page 37.

TABLE 4. (Cont.)

Criteria	System Component	Effects
36. (Cont.)	Small-area treatment plants	Those existing plants that continue in operation or future plants that may be built will discharge pollutants that may reduce the aesthetic value of creeks running through recreational areas. Mitigation: Strong enforcement of discharge permits to encourage good operation.
37. Avoids adverse visual impacts (EPA Construction Grants Guidelines)	Interceptor segments MF-1, MF-2, MF-4, GS-1, GS-2, GS-3, GS-5, LG-1, LG-2, NC-2, NC-3, NC-4, NC-7, NC-8	These interceptor segments will pass through natural areas of high scenic quality. Mitigation: See page 37.
38. Avoids adversely affecting archaeological resources (National Historic Preservation Act; Executive Order 11593)	Interceptor segments NC-3, NC-4, NC-5, NC-6, NC-7, NC-8, GS-1, GS-4, GS-5, GS-6, LG-1, LG-3, LG-4, LG-5, LG-6, HC-1	These interceptor segments run through areas of medium to high potential for containing archaeological sites. Further surveying and testing is recommended; see page 34.
39. Avoids adversely affecting agricultural lands (EPA Policy to Protect Environmentally Significant Agricultural Lands)	Interceptor segments GS-5, NC-1, NC-2, NC-3, NC-4, NC-5, NC-6, NC-7	These sewer segments may take agricultural lands out of production during construction of the interceptor; but once the sewer is in place, the affected areas can return to production. Mitigation: Stockpile top soil and use to landscape to original grade; compensate farmers for lost income during construction phase.

TABLE 4. (Cont.)

Criteria	System Component	Effects
40. Avoids adversely affecting floodplains and wetlands (Clean Water Act; Executive Order 11988; EPA Policy Statement of Procedures: Floodplains and Wetlands)	Interceptor segments MF-1, MF-2, MF-3 NC-1, NC-2, NC-3, NC-4, NC-5, NC-6, NC-7, NC-8, HC-1, TL-1, GT-1, GS-1, LG-1	These segments will be placed in the Ohio River floodplain. During construction, there will be a hazard to crews and equipment, but early warning and preparedness can avoid major impacts. After construction, the ground surface will be returned to its original contour so there will be no effect on floodwater movement. Mitigation: None required.
	Interceptor segment NC-2	This segment runs near the Muddy Fork wetland area, the only known wetland in the study area. Mitigation: See page 35.
	Regional treatment plant	The plant site is located in the 100-year floodplain of the Ohio River. Locations out of the floodplain are impractical because of high pumping costs. Mitigation: Construct levee around plant to protect it. Impact on floodplain is unavoidable.

Several federal laws and regulations require that mitigative measures be implemented on federally funded projects to protect certain resources of national value:

Archaeological sites
Historic sites
Floodplains
Wetlands
Navigable waters
Environmentally significant agricultural lands
Rare and endangered species
Significant aquatic and terrestrial habitats
Wild, scenic, and recreational rivers

The North County area does not contain any officially designated wild, scenic, or recreational rivers, so that category is not applicable here. All the other categories are affected to some extent by the regional system, and actions to mitigate the effects are summarized in this section. These mitigative actions may be required of the grantee--i.e., the construction grant will be contingent on the grantee implementing the action--or they may simply be recommended for the grantee's consideration. In addition to the actions necessitated by federal laws or regulations, certain actions are recommended to preserve natural features of local significance. These mitigative actions are not required by federal laws, but their implementation should satisfy local principles on environmental protection, as outlined in the Comprehensive Plan for Louisville and Jefferson County.

Archaeological and Historic Sites

EPA-funded projects are subject to the requirements of Section 106 of the National Historic Preservation Act of 1966, the Archaeological and Historic Preservation Act of 1974, Executive Order 11593, and regulations of the Advisory Council on Historic Preservation (36 CFR Part 800). In essence, these laws and regulations require mitigation of impacts to historic or archaeological sites on, or eligible for, the National Register of Historic Sites. To fulfill these requirements, construction grants for any North County LS2a interceptor segments will be contingent upon the grantee furnishing:

1. Certification from the State Archaeologist that the construction will not affect any known archaeological sites on or eligible for the National Register; and

2. Certification from the State Historic Preservation Officer (SHPO) that the construction will not affect any known archaeological or historic sites on or eligible for the National Register.

Interceptor segments MF5, MF6, GT1, GB1, GS2, GS5, PL1, LG1, NC3, NC4, NC6, and NC7 have been identified as lying near currently designated historic sites; see the Draft EIS (U.S. EPA 1983a) for details. In addition, for interceptor segments NC3, NC4, NC5, NC6, NC7, NC8, GS1, GS4, GS5, GS6, LG1, LG3, LG4, LG5, LG6, and HC1, the grantee shall submit a plan for conducting an archaeological survey of the type recommended in the Draft EIS (U.S. EPA 1983a); the plan shall have been approved by the State Archaeologist. Furthermore, the grantee shall agree to inform EPA, the State Archaeologist, and the SHPO of the findings of the survey, allowing a reasonable time for comment before construction actually begins.

The installation of collector sewers in several neighborhoods--Glenview Estates, Riverwood, Indian Hills, Riviera, Windy Hills--may affect houses on or nominated to the National Register. It is recommended that the grantee consult with the State Historic Preservation Officer about collector routes in these neighborhoods.

Floodplains

Locating the NC5 pumping station and the regional treatment plant in the Ohio River floodplain are unavoidable impacts. Both locations will have to have flood protection, presumably levees, and both sites will reduce floodplain area. It is recommended that the site contained within the levee be kept as small as possible so as to minimize the loss of floodplain.

Wetlands

The only known wetland of significant size in the study area is the Muddy Fork wetland, also known as the Caperton Swamp. Construction in wetlands requires a permit from the U.S. Army Corps of Engineers, as authorized by Section 404 of the Clean Water Act. Before a grant will be approved for the NC2 interceptor segment, the grantee is required to obtain a permit from the Corps of Engineers or to submit a statement from the Corps that they have been consulted over the route of the interceptor and have determined that the construction does not require a permit. See Section 5.4.4 of the Draft EIS for more specific information on this wetland.

Navigable Waters

The U.S. Army Corps of Engineers (see page 117) has identified the following interceptor segments as paralleling streams within the Corps jurisdiction: NC-6, NC-7, NC-8, MF-1, MF-3, GS-1, GS-2, GS-3, LG-1, LG-2, LG-3, LG-4, LG-5, LG-6, WS-1, WG-1, GT-2, PH-1, TL-1, and HC-2. A permit from the Corps will be required for any crossing or filling of streams within their jurisdiction.

Environmentally Significant Agricultural Lands

The LS2a regional system only serves development existing at the time the grant is approved. Federal funds, therefore, will not be supporting future development of environmentally significant agricultural lands. Certain interceptor segments, particularly in the Ohio River floodplain, will pass through significant farmlands (see Table 4). It is recommended that the soil in these corridors be returned to its pre-construction condition so that productive use of the land may continue. During excavation, topsoil should be segregated from subsoil and returned to the surface during backfill.

Rare and Endangered Species

Although the peregrine falcon has been sighted in North County (in the vicinity of interceptor segment GS3), there are no known habitational areas for it within the study area. Protection of the Indiana bat, however, is of potential concern along interceptor routes. The bat is on the federal list of endangered mammals and is known to establish summer (maternity) colonies in old trees of stream bottoms within 20 miles of the study area (MacGregor 1983). Several interceptor segments (MF1, 2, 3; GC1, 2; and others) contain habitats that appear suitable for summer colonies of this bat. Several mitigation steps are recommended to minimize potential adverse impacts to this species:

1. Avoid removing huge old trees along stream bottoms and ravines that might serve as nesting sites.
2. If old trees must be removed, avoid doing so in the summer months when bats are likely to use trees as nesting sites.

It is required that the grantee contact the Kentucky Department of Fish and Wildlife Resources if there are conflicts with preserving suspected bat habitat.

It is also required that the grantee consult with the Kentucky Nature Preserves Commission when constructing interceptor segments where species of local concern have been found:

Interceptor Segment	Species
MF4, NC8	Louisville crayfish
MF1, NC2	Yellow-crowned night heron, hooded merganser, least bittern, king rail, pied-billed grebe
GS1, GS2	Ginseng

See Section 5.4.4 of the Draft EIS for more specific information on these habitat areas.

Natural Areas

Locally important natural areas were noted in an environmental survey of LS2a interceptor corridors (see Section 5.4.4 of the Draft EIS). The ravine-slope and bottomland forests are locally significant as the last remaining major natural areas in North County. Two particular areas--the Muddy Fork wetland and the lower Goose Creek Valley--are being studied by the Kentucky Nature Preserves Commission for possible designation as state nature preserves; it is required that the Commission be consulted about project activities in these areas.

The Caperton swamp forest and the bottomland hardwood forests on the floodplain terraces of the Ohio River have been designated as Category 2 resources by the U.S. Fish and Wildlife Service (see page 129). Designation criteria for Resource Category 2 are:

> "Habitat to be impacted is of high value for evaluation species and is relatively scarce or becoming scarce on a national basis or in the ecoregion section."

The mitigation goal for Resource Category 2 is no net loss of inkind habitat value. Before a grant will be approved for interceptor segments NC2-7, the grantee is required to consult with the U.S Fish and Wildlife Service in order to achieve the mitigation goal for Resource Category 2.

The environmental survey also noted many significant natural features for which mitigative actions are recommended:

Interceptor Segment and Natural Feature	Recommended Mitigation
MF3, MF2 Mature sycamore grove; multiple pools, snags, ripples	Avoidance: locate sewer along east side of road
GS5 Limestone Outcroppings	Avoidance
GS1, 2, 3 Mature ravine forests	Conduct biological survey of specific route; minimize clearing of vegetation, particularly significant trees, herbaceous groupings, etc.; relocate important species.
LG3 Braided stream, riffle-and-pool habitat	Avoid stream crossings; keep sewer back from stream bed
LG2 Natural ford and small falls	Avoid stream crossing; control sediment runoff upstream
HC1 Putneys Pond	Minimize disturbance of woods between road and pond
NC8 North-facing bluffs: waterfalls and significant aquatic and terrestrial habitats	Avoidance: keep interceptor on northern bank of Harrods Creek; protect large trees; move valuable herbaceous plants

Recreational and Visual Resources

The GS6 interceptor traverses Hounz Lane County Park and E. P. Sawyer State Park. The grantee is required to consult with the local and state agencies responsible for operating these parks to select the most environmentally sound route and to minimize disruption of park activities. The environmental survey also noted many forested areas that are significant visual and recreational resources; see Section 5.4.4 of the Draft EIS for details.

4. ERRATA AND REVISIONS TO THE DRAFT EIS

Page	Paragraph	Lines	Corrections
3			A revised Figure 1 is provided in the Executive Summary of this document.
7	1	3-4	"...all but five of the plants..."
7	2	4	"...and located southwest of Louisville..."
19	2	3	"...available before 1987."
32	5	5	"...all but five of the plants..."
36			The third page of Table 7 was printed twice and the second page omitted some printings of the Draft EIS. The correct second page is provided on the next page of this document.
76	2	18	"...shown in Figure 10:"
98	4	5	"...Hite Creek (18), Bellwood Presbyterian Home (4), St. Thomas Orphanage (35), and the four..."
102	4	15	" $10/person/year"
177	3	3	"...available before 1987."
203	3	7-8	"The assessment is based upon assessable units. An assessable unit is defined as "a single-family residential lot, or equivalent, on which no more than one single-family residence can reasonably be constructed." Properties other than single-family residential lots shall be equated to assessable units, as determined by MSD. Apartment units are deemed equal to one-half an assessable unit. MSD's assessment policy protects..."
223	3	7-8	"...small habitational sites may occur..."
224	2	7-8	"...small habitational sites may occur..."
237	2	1	"...require that mitigative measures..."
242			Table 60, column 2, third member should be "...City of Windy Hills"

Preceding page blank

TABLE 7. (CONT.)

Map Key	Treatment Plant	Design Flow (gpd)	Actual Flow (gpd)	Treatment Process Liquid	Treatment Process Sludge
19	Holiday Inn Motel	52,000	NA(a)	Extended Aeration	Anaerobic Digestion
20	Holiday Manor Shopping Center	22,000	22,000	Extended Aeration	Aerobic Digestion
21	Hounz Lane Park	1,500	NA	Extended Aeration	NA
22	Hunting Creek North	236,400	189,120	Extended Aeration	Aerobic Digestion
23	Hunting Creek South	167,600	91,200	Extended Aeration-Lagoon	Anaerobic Digestion
24	Ken-Carla Subdivision(b)	10,000	10,000	Extended Aeration	NA
25	Kentucky Children's Home	45,000	17,822	Trickling Filter	Sludge Drying Beds
26	Louisville Country Club	13,500	13,500	Septic Tank-Intermittent Sand Filter	NA
27	Muddy Fork(b)	360,000	84,600	Extended Aeration-Micro Strainer	Aerobic Digestion
28	Murray Hills Subdivision	326,600	171,200	Extended Aeration	Anaerobic Digestion
29	New Market Subdivision	80,000	80,000	Extended Aeration	Aerobic Digestion
30	Norton Elementary School	15,000	6,500	Extended Aeration	NA
31	Plantation Subdivision	60,000	60,000	Extended Aeration	NA
32	Plantation Hills Subdivision	30,000	30,000	Extended Aeration	NA
33	Rolling Hills Subdivision	585,000	585,000	Extended Aeration	Anaerobic Digestion
34	Running Creek Subdivision	110,000	10,000	Extended Aeration-Mixed Media Filter	Anaerobic Digestion
35	St. Thomas Orphanage	3,000	1,000	Trickling Filter	NA
36	Shadow Wood Subdivision	85,000	15,000	Extended Aeration	NA
37	Spring Valley Estates Subdivision	100,800	NA	Extended Aeration	Aerobic Digestion
38	Springdale Subdivision	60,000	800	Extended Aeration-Lagoon	Aerobic Digestion
39	Standard Country Club	15,000	15,000	Trickling Filter	NA

(a) Not Available.
(b) MSD owned and operated.

5. PUBLIC COMMENTS AND EPA RESPONSES

5.1 Oral Comments

Oral comments on the Draft EIS were received at a public hearing held on February 7, 1984, at the Ballard High School Cafetorium. This section contains the transcript of the hearing, including introductory statements made by representatives of EPA and the Kentucky Natural Resources and Environmental Protection Cabinet. Public comments and EPA's responses begin on page 60. Table 5 is an index to the oral comments, and Table 6 summarizes the general subjects mentioned by each commentor.

TABLE 5. INDEX TO PUBLIC HEARING COMMENTS ON NORTH COUNTY DEIS

COMMENT CODE	PAGE(S)	COMMENTOR	NATURE OF COMMENT
LWC-1.	61	Louisville Water Company	Support LS2 type alternative
LWC-2.	61	Louisville Water Company	Alternative selected based on federal funding
LWC-3.	61	Louisville Water Company	Alternative selected based on federal funding
DCS-1.	63	Dr. Carl Sturm	Construction grant priorities
DCS-2.	63	Dr. Carl Sturm	Sewering priorities
NW-1.	64	Neal Webster	Encourages building for growth
KCT-1.	66	K.C. Tsai	Elimination of 201 alternative
KCT-2.	66	K.C. Tsai	Modify 201 alternative for existing population
KCT-3.	66	K.C. Tsai	Divert additional flows to Hite Creek
LWV-1.	67-68	League of Women Voters	Federal funding is EIS's major concern
LWV-2.	69	League of Women Voters	EPA has wrecked 201 plan
LWV-3.	69	League of Women Voters	Mill Creek EIS
LWV-4.	70	League of Women Voters	EPA's share of funding
LWV-5.	70	League of Women Voters	Small-area treatment plant malfunctions
LWV-6.	71	League of Women Voters	EPA's share of funding
LWV-7.	71	League of Women Voters	Clean Water Act amendments
LWV-8.	71-72	League of Women Voters	EIS prevented local action
LWV-9.	72	League of Women Voters	Local long-range planning
LWV-10.	72-73	League of Women Voters	Intent of NEPA and Clean Water Act
LWV-11.	73	League of Women Voters	Long-range planning
LWV-12.	73	League of Women Voters	Technical feasibility of the selected alternative
LWV-13.	73	League of Women Voters	Affordability of the selected alternative
LWV-14.	73	League of Women Voters	Public health and environmental protection
WH-1.	74-75	Winnie Hepler	What happens next
WH-2.	75	Winnie Hepler	Water quality improvement
WH-3.	77	Winnie Hepler	Enforcement of water quality standards

TABLE 5. (Cont.)

COMMENT CODE	PAGE(S)	COMMENTOR	NATURE OF COMMENT
EJ-1.	79	Elbert Johns	Metropolitan Sewer District
M-1.	80-83	Mrs. Molesky	Review Committee
M-2.	82	Mrs. Molesky	Septic tank problems
CS-1.	84-85	Cliff Sawyer	Lead role for sewering

TABLE 6. SUMMARY OF GENERAL TOPICS COVERED BY ORAL COMMENTS

		SURFACE WATER QUALITY	SEPTIC TANKS/SMALL-AREA PLANTS	FUTURE GROWTH/ PLANNING	CONSTRUCTION GRANTS/ FEDERAL FUNDING	MSD POLICY	1964 MASTER PLAN/ 1975 201 PLAN	COST	REVIEW COMMITTEE
1.	Louisville Water Company	1			2				
2.	Dr. Carl Sturm				2				
3.	Neal Webster			1					
4.	K.C. Tsai			1	1			1	
5.	League of Women Voters	1	2	3	4		2	1	
6.	Winnie Hepler	2			1				
7.	Elbert Johns					1			
8.	Mrs. Molesky		1						1
9.	Cliff Sawyer				1				

NORTH JEFFERSON COUNTY, KENTUCKY
ENVIRONMENTAL IMPACT STATEMENT
FOR PROPOSED WASTEWATER FACILITIES

DRAFT EIS PUBLIC HEARING

FEBRUARY 7, 1984

BALLARD HIGH SCHOOL

LOUISVILLE, KENTUCKY

7:30 P.M.

REPORTER: ALICE J. BALLARD

KENTUCKIANA REPORTERS
125 South Seventh Street
Louisville, Kentucky 40202
(502) 589-2273

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** ** ** ** **

A P P E A R A N C E S

HOWARD ZELLER
Assistant Regional Administrator
Southeastern Region
United States Departmental Protection Agency
Atlanta, Georgia

RICHARD SHOGREN
Director
Division of Water, Cabinet for
Natural Resources & Environmental Protection
Frankfort, Kentucky

RONALD MIKULAK
Project Officer
Environmental Assessment Branch
EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

** ** ** ** **

MR. ZELLER: It's a little past 7:30 and since we have a number of speakers that want to participate in this hearing process, I'd like to open up this public hearing. Let me start off by welcoming all of you here and

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thanking you for participating in the EPA public awareness process here tonight by coming out on a cold night to be present at this hearing.

We're here, of course, to discuss the Environmental Impact Statement for the Proposed Wastewater Facilities for North Jefferson County, Kentucky.

Let me introduce myself and the members of the panel who are here with me. My name is Howard Zeller, and I am the Assistant Regional Administrator for the Southeastern Region of the United States Environmental Protection Agency. My office is in Atlanta, Georgia.

On my immediate right is Ronald Mikulak who is Project Officer for the EIS, and then to my far right is Rich Shogren who is Director of the Water Division of the Natural Resources and Environmental Protection Department of Kentucky.

The purpose of the hearing this evening is to receive public and other agencies' comments on the wastewater management proposal contained in the North County Draft Environmental Impact Statement. The EIS is

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being prepared on the wastewater facilities proposed in the 201 Facilities Plan prepared for the Louisville-Jefferson County area by the Kentuckiana Regional Planning and Development Agency. The preparation of this EIS is authorized by the Clean Water Act and the National Environmental Policy Act or NEPA.

The Clean Water Act enables EPA to fund up to seventy-five percent of the eligible costs for the planning, design and construction of wastewater facilities. However, effective on October 1, 1984, this amount will be reduced to fifty-five percent. The planning phase of this process results in the preparation of a facilities plan. In this instance, the Kentuckiana Regional Planning and Development Agency was designated as the local agency responsible for facilities planning in this area and the Louisville-Jefferson County Metropolitan Sewer District was charged with the responsibility of implementing the 201 Plan Proposal.

Now, the National Environmental Policy Act or NEPA requires federal agencies to prepare an environmental

impact statement on major federal actions that significantly affect the quality of the human environment. Because of the environmental complexities and water quality issues involved in this project, Environmental Protection Agency made the decision to prepare an EIS on the 201 Facilities Plan. Accordingly, in June of 1979, the notice of intent to prepare EIS was issued.

Pursuant to the guidelines of the President's Council on Environmental Quality and the rules and regulations of EPA with regard to the preparation of EIS's, this public hearing is being held to receive comments on the Draft EIS. The Draft EIS is being discussed in this public forum to encourage public participation in the federal decision-making process and to develop improved public understanding of all federally funded projects.

In this regard the Draft EIS was made available to the public, it was at EPA's Office of Federal Activities, and it was listed in the federal register on December 30, 1983. The Draft EIS comment period will extend until February 29, 1984. The comments received during this evening and during the comment period will become part of the official record on this project.

Any questions or issues that are raised here at this hearing tonight or during the comment period will, of course, be answered in the final EIS when it is promulgated at a later date.

Now, so that we all have a full understanding and appreciation of the project underway, and many of you I know have been involved in this from the beginning in scoping meetings and elsewhere. But, nevertheless, before we begin with any testimony on this, I'd like to ask Mr. Ron Mikulak who is the Project Officer on this project and associated very closely for a number of years to give us a brief summary on the project. And I'll ask Mr. Mikulak to do that now, please.

MR. MIKULAK: Thank you, Mr. Zeller. Can you hear me in the back?

I would also like to welcome you this evening and braving the chilly

elements in Louisville. As Mr. Zeller indicated. I am the Project Officer for EPA on this EIS. My office is also located in Atlanta.

What I would like to do this evening before we start to receive testimony from the floor is to provide you with a brief overview and summary of the Draft EIS. Many of you, I know, are very familiar with the EIS and have followed the progress of the study through the years. But some of you are new to it, and, I think, if I provide a brief overview and background of the study it might put things in a little bit more perspective.

What I would like to do is follow the outline that we have provided in the handout that you should have picked up when you came in this evening. The front cover is the agenda followed by three pages of an outline, which, if you follow, you will follow closely with the comments that I make this evening. The last three pages of the handout are maps of the study area. The first is a general location map of the North County study area, as we call it, the northeastern part of Jefferson County, Kentucky. The last two maps are proposed routing of interceptor lines for the preferred alternative. The last map is a schematic representation of what the different service areas for different portions of the preferred alternative involve.

I would like to, as indicated by the agenda, go to the purpose of the EIS, background of the study, the alternatives that have been investigated, changes in the Construction Grants Program and the Clean Water Act that affect the decisions in the EIS, the EIS preferred alternative, and, finally, mitigative measures that are suggested in the EIS.

The purpose of the North County EIS was to identify and evaluate wastewater management alternatives for the North County study area of Jefferson County. And, again, I think I noted in Figure 1 in the handout. Through the EIS process a range of alternatives were considered leading to the selection of a cost-effective and environmentally sound wastewater management approach. I think it is important to point out that the approach,we recommended in the EIS is one

that represents the project that EPA could support through our Federal Construction Grants Programs.

In going back in time for a few moments and looking at the project background of the EIS

I'd first like to mention the Clean Water Act. The Clean Water Act was first passed in 1972 and further amended in 1977 and 1981. The focus of the Clean Water Act was to improve the quality of the nation's waters. One mechanism that is available is Section 201 of the Clean Water Act. Section 201 of the Act authorized the Environmental Protection Agency to fund wastewater facilities under what is called the Construction Grants Program. In the Construction Grants Program, seventy-five percent funding is made available for planning, designing and constructing wastewater facilities. To meet the mandate of Section 201 of the Clean Water Act, state water pollution control agencies designate local planning agencies to develop wastewater management strategies for a specific area. These strategies are called 201 Plans.

As Mr. Zeller mentioned in his opening remarks, the Kentuckiana Regional Planning and Development Agency, KIPDA, was chosen as the 201 planning agency for Jefferson County. And the Louisville and Jefferson County Metropolitan Sewer District, MSD, was chosen to implement the recommendations of the 201 Plan.

Recommendations in the 201 Plan that was completed in 1974 for North County involved the proposal of a new regional North County treatment plant to serve virtually all of the North County study area. The treatment plant would be located on the Ohio River and discharge treated wastewaters to the river.

In 1975 EPA and the Kentucky Department for Natural Resources and Environmental Protection, which is now known as the Cabinet for Natural Resources and Environmental Protection, reviewed the 201 Plan and determined it to be substantially complete. This action led the way for EPA to commit federal funds for design and construction projects that were initiated in southwest

Jefferson County.

Early in 1977, concurrent with project construction in Southwest Jefferson County, various citizens groups requested EPA to prepare an Environmental Impact Statement. In 1977, EPA reviewed the concerns of the citizens and issued a notice of intent to prepare an EIS, Environmental Impact Statement on facilities in southwest Jeffer. County. Subsequent to that notice of intent EPA was requested by various groups and agencies to re-examine the scope of the EIS and in doing so a public scoping meeting was held in February of 1978 to define the issues, determine the scope of the project and ensure public involvement in the agency decisions.

And, finally, in May of '78 a notice of intent to prepare the Mill Creek EIS was issued. And that concentrated on facilities, again, in southwest Jefferson County. However, because of environmental complexities and issues raised in the northeastern part of the county it was determined in May of '78 and recognized at that time that a North County EIS would be prepared.

And, finally, in June of '79 the North County notice of intent was issued; July of '79 the North County scoping meeting was held; December of '83 the Draft EIS was issued and February '84, this evening, we are holding the Draft EIS public hearing. And the final EIS is expected to be completed this summer, summer of '84.

Now, in going through the scoping process of the EIS, I think it's important to mention the several issues that were raised by citizens and local and state agencies. These included the evaluation of wastewater management alternatives for the study area, the location of wastewater treatment plants and discharge location, evaluation of effluent disposal, the cost associated with wastewater management alternatives, the effects of facility construction and available mitigation, the establishment of priority water quality and public health problem areas caused by the numerous septic tanks and operating package plants in the study area.

Now, putting the Draft EIS preferred alternative in perspective ', I

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think it might benefit the audience to understand the kinds of existing wastewater management practices that we see in the North County area today. Currently, we see a mix of small wastewater treatment plants, sometimes called package plants. Also, septic tanks and several regional facilities.

The regional facilities I refer to include the Morris Forman Wastewater Treatment Plant which is MSD's one hundred and five million gallon per day facility located south of Louisville. It serves the southern portion of the North County study area. You can see the area noted on the last figure in the map that indicates the service area that is served by Morris Forman.

Additionally, there is the Hite Creek -- MSD's Hite Creek four point four million gallon per day wastewater facility that serves the northeast portion of the study area. The Hite Creek plant is located near the intersection of Brownsboro Road and I-71 and discharges to Hite Creek.

There are approximately forty-nine package plants in the study area that serve institutions, parks, shopping centers and residential areas. The total combined flow of these package plants approximates five million gallons per day. All but four of the package plants are privately owned and they all discharge to small area streams.

With reference to on-site systems or septic tanks, there are over seven thousand septic tank systems in the study area, with the majority of these septic tank systems being a septic tank lateral field serving primarily residential areas.

One note on the mix of facilities that we see now, in that in the mid-1970's greater emphasis was placed on package plants, the small wastewater treatment plants that we see. Primarily because of two reasons. First is the unavailability of public sewers through a regional sewer system, and, secondly, because of Health Department regulations that effectively restrict the development of septic tanks on lots that -- require lots greater than five acres.

Now, in determining a cost effective and environmentally sound

program for correcting public health and water quality problems in the area four area-wide alternatives were developed as part of the EIS. These four alternatives -- going on to the second page of the outline. These four alternatives vary in the mix of the three basic wastewater management options that I outlined previously; on-site systems, package plants and regional systems. On-site systems were considered feasible in only a few areas as allowed by state and local regulations. Package plants were considered feasible if designed to meet specified discharge requirements.

A Regional North County Wastewater Treatment Plant involves a new treatment plant located on the Ohio River at the mouth of Beargrass Creek and an interceptor system serving one or more of the main creek basins of the study area.

Of the four alternatives that were considered.

The first is the No Federal Action Alternative, sometimes shortened to be termed as the No Action Alternative. The No Action Alternative assumes that no federal funding is available and under those circumstances the existing wastewater management practices would continue. Small area package plants would be the primary method of wastewater management in the study area, with the number increasing from the existing forty-nine to roughly seventy or eighty by the year 2000.

The 201 Plan Alternative is virtually the 201 Plan recommended alternative and it assumes -- sewering virtually the entire existing and future population in the North County study area and that wastewater being treated at a new North County Treatment Plant. All existing septic plants and package plants and future development would be connected with the year 2000 flow of approximately nine million gallons per day.

Limited Sewered Alternative #1 has the objective of relieving all unsewered communities with significant numbers of failing septic tanks and as many package plants as feasible. Future population under the LS1 alternative would be served by either package plants -- future package plants which is termed LS1-A or by capacity

accommodated at the new North County Treatment Plant. That alternative or sub-alternative is termed LS1-C. Depending on how future flow is handled. either at package plants or at the North County Treatment Plant, the new North County Treatment Plant would be sized at anywhere from five to six million gallons per day and the number of package plants in the study area would be anywhere from twenty-two to twenty-six.

Under Limited Sewered Alternative #2 (LS2). Again, the objective of LS2 is to relieve all septic tank problem areas and existing package plants. And, again, the future population is served by package plants under a sub-alternative LS2-A or the regional plant under LS2-C. The new North County Plant would be sized at either six point five to seven point one MGD with roughly six to nineteen package plants existing in the study area.

During the preparation of the EIS, Congress authorized changes to the Clean Water Act that does affect the way that the Construction Grants Program operates and, in turn, affects decisions that we make in this EIS. There are three major changes that I think bear discussion this evening.

The first being that lower overall authorization for the grants program than had previously been authorized was seen in 1981, that is, the sum of money available for the 201 Program had been reduced in total. Number two, the Federal share of seventy-five percent funding was reduced to fifty-five percent funding. This reduction becomes effective on October 1st, 1984. And, third. there is a restriction on the use of Federal funds for conveyance or treatment capacity beyond the existing population at the time of a Construction Grants Award or the year 1990. And this also becomes effective October 1st, 1984.

Another element that is important in the overall decision process involves Kentucky's priority list. The State agency in Kentucky, the Division of Water in the Cabinet of Natural Resources and Environmental Protection, establishes a priority list for funding projects under EPA's Construction Grants Program. Based on recent projections in the

priority list, it is not expected that the North County Proposal be funded until sometime beyond 1986. For this EIS and the decisions that we make at this time in the EIS and looking at the funding -- or potential funding date for the North County Project it is therefore assumed that Federal participation in this project will be at the fifty-five percent level and capacity to serve needs at the time of the grant award or 1990 only will be eligible. The future applications of these assumptions to any actual project is subject, however, to the laws, the regulations and funding levels applicable at the time of grant award.

Based on the evaluation of alternatives and looking at environmental impact, the cost, operability and reliability, changes in the Clean Water Act, et cetera, EPA made the decision to select alternative LS2-A as the Draft EIS Preferred Alternative. As shown in pictures two and three of the handout, LS2-A proposes a new North County Wastewater Treatment Plant to serve most areas currently served by on-site systems and package plants with the future population being served by new package plants. This alternative represents the maximum funding position available to EPA under current legislation in relieving the water quality and public health problems in the area.

It is very important to note, however, that EPA's funding decision does not prevent local authorities from providing a larger regional system to include sewer service for future growth. Any capacity or facilities for future growth will, however, not be eligible for Federal funding.

The LS2-A Alternative proposes to serve all but seven of the area's, forty-nine existing small area plants, and all but two to five of the areas thirty-two unsewered communities. The proposed North County Wastewater Treatment Plant would be sized at approximately six point five million gallons per day and it is proposed to be located between I-71 and the Ohio River at the mouth of Beargrass Creek. The preferred discharge arrangement includes a shoreline outfall below Tow-Head Island at river mile 603.

The regional interceptor system would serve existing development in the Muddy Fork basin, the Woodside Creek basin, most of Goose Creek basin, the Little Goose Creek basin, and Harrods Creek basin, and roughly forty miles of proposed interceptors would be required as part of the project.

The population to be served by the six point five North County Treatment Plant is estimated to be roughly fifty-four and a half thousand people. Future population, that is, population from the year 1990 to the year 2000 is estimated to be approximately twelve thousand three hundred. The means by which future populations are served are, as I pointed out before, are local decisions. The total estimated project costs for LS2-A are roughly one hundred thirteen million dollars. The EPA's grant amount, at fifty-five percent funding, would be twenty-six million dollars, with the local share at eighty-seven million dollars.

Estimated household costs for existing sewer populations. Those populations now served by package plants, are roughly a hundred and fifty dollars a year.

Those existing unsewered communities would see an annual costs of roughly one thousand dollars per year. Combining that, for an average of three hundred and sixty dollars per year.

Now, the discussion of proposed mitigative measures will also highlight some of the more significant impacts associated with the preferred alternative. Looking on the last page of the outline form of the handouts.

The first involves archaeological/historical sites. The installation of several interceptor lines may affect sites on the National Register of Historic Places. For those particular interceptors or interceptor segments surveys and coordination with the State Historic Preservation Officer and the State Archaeologist will be required.

Floodplain impacts. Flood protection measures for pump stations and the North County Treatment Plant will be required.

Wetlands. The Muddy Fork wetland, located down along the lines of

the Ohio River, any construction activity that might involve the Muddy Fork wetland is required to be coordinated with the Corps of Engineers as well as with the Kentucky Nature Preserve.

Environmentally significant agricultural lands. It is EPA's policy to avoid the irreversible conversion of environmentally significant agricultural lands to other uses, to other non-agricultural uses. Alternative LS2-A serves only existing development, not future development that might locate on these lands. Certain interceptors, however, may pass through agricultural lands, prime agricultural lands. In that case it is recommended that those lands be returned to pre-construction conditions.

Endangered species. There may exist areas along the interceptor segments that contain species of local concern or potential habitats of endangered species. In that case coordination with the Fish and Wildlife Service and the Kentucky Nature Preserve are required.

Natural areas. Two particular areas, the Muddy Fork wetland and

Lower Goose Creek Valley, are being studied by the Kentucky Nature Preserve for possible designation as state preserves. Coordination with the Kentucky Nature Preserve is therefore required.

Additionally, as part of the EIS we conducted environmental surveys of interceptor segments and noted many natural features along the creek basins for which specific mitigation actions are recommended and these are detailed in the EIS, Draft EIS.

And, finally, Park areas. Two parks, Hounz Lane Park and E. P. Sawyer Park will be crossed by interceptors. It will be required that appropriate state and local agencies be consulted concerning these park crossings.

Now, as a final note, I would like to point out that during the preparation of the EIS we did establish -- the EIS review committee that was composed of many citizens in the area, representatives of many fifth and sixth class cities in the study area, representatives of local agencies, state agencies, environmental groups -- these people

have worked with us throughout the years of this EIS in attending meetings, reviewing reports, providing us with comments and spending a good deal of their time involving themselves in this project. Many of these people are here this evening and I would like to personally thank those who were involved in the committee for their efforts, their time, their patience and I hope they think the effort was indeed worth it.

That will conclude my comments. I would like to point out that we did provide additional copies of the Draft EIS for those of you who did not receive a copy in the mail. If we have run out of copies at the registration table please see me afterwards, provide me with your name and address and when I get back to the office tomorrow I will put a copy in the mail and send one on to you.

Thank you so much.

MR. ZELLER: Thank you, Mr. Mikulak. As most of you here know, the Environmental Protection Agency and the State of Kentucky share jointly in the responsibility for environmental protection in Kentucky. And next I would like to ask Mr. Shogren to make a statement for the record.

MR. SHOGREN: Thank you, Howard. I just have a few brief comments to make.

My name is Richard Shogren and I am Director of the Division of Water within the Kentucky Natural Resources and Environmental Protection Cabinet. I am pleased to be here this evening as a representative for our new Cabinet Secretary, Charolotte Baldwin, and also as a representative of Mike Taimi who is Commissioner of the Department for Environmental Protection.

The Division of Water has major responsibility for establishing a priority system by which federal construction grants for public wastewater treatment projects are passed from EPA to local communities. Federal construction grants are authorized under the National Clean Water Act.

As discussed in the EIS Summary, certain major changes occurred in 1981 which will have an impact on the amount of Federal assistance that is available for any future public wastewater treatment projects.

The major financial impact will be a reduction in the federal share of construction costs from seventy-five percent to fifty-five percent for all projects approved after September 30th, 1984.

Currently, Kentucky receives thirty-one point one million dollars in Federal assistance per year which can be used as a part of the Federal Constructions Grants Program. While this is a substantial amount of money, Kentucky had available more than three times that amount of money in 1976 and twice as much money in 1978 and '79. Also, the indicated statewide needs for wastewater treatment facilities that are summarized in this annual document, which is produced by the Division of Water and Cabinet, the indicated statewide -- the needs that appeared on this year's construction grants priority list were six hundred and sixty-four million dollars. Compared to these numbers the annual allocation is a small amount of money. The current Construction Grants list provides approximately twenty million dollars per year to large communities in the state for wastewater treatment facilities.

The North County Wastewater Treatment System is ranked as the seventh most important project on the current priority list with proposed funding beginning in 1987. However, this funding schedule is based on three higher priority projects being funded at a fifty-five percent level after October 1st, 1984. These three projects -- the Louisville Metropolitan Sewer District's Morris Forman Project, the West County Treatment Plant and the Lexington-Fayette County Urban Government Town Branch Plant may be eligible for seventy-five percent EPA participation as continuation projects initiated in 1984. If these projects are funded at seventy-five percent funding and if the current allocation of federal funds to large communities continues at a level of approximately twenty million dollars per year, the North County Project would not be eligible for Federal funding prior to 1990. This also assumes that the current estimated cost of these three major projects will not increase.

Jefferson County faces major issues today in expanding its wastewater

treatment facilities. The 1970's approach of depending on available Federal funds will be a difficult course to pursue given the reductions that have occurred in recent years and the other demands which exist within the State of Kentucky. Careful consideration should be given to the desirability of waiting for Federal funds, which may be six years away from being available, and the relative needs for wastewater facilities in North Jefferson County given the growth potential of this part of the county.

Division of Water is ready, willing and able to provide whatever it can in the way of technical assistance to Jefferson County in terms of implementing and reaching a decision on the schedule for needs within the county.

Thank you very much.

MR. ZELLER: Thank you, Mr. Shogren.

Before I go ahead and accept testimony from the floor, let me make sure that all of you present here have registered as you came in. It's important that we have a record of the meeting so that you can be notified of the action that follows this meeting and also, of course, if you wish to speak we use the cards to identify the speakers.

So that everyone has an opportunity to speak, I'd like to ask all of the speakers to limit their testimony. If you have a long written testimony, please submit that for the record and try to summarize your remarks.

As we proceed with the hearing, I will generally try to call on speakers in the order in which you registered. And with this as a way of background, let me start off by asking our first speaker, Mr. Stephen Hubbs. All speakers I would ask to appear at the podium, state your name for the record and if you represent any particular group or represent yourself, please indicate so.

Mr. Hubbs, we're pleased to have you here today.

MR. HUBBS: Thank you, Mr. Zeller.

My name is Steve Hubbs and I am a Staff Engineer with the Louisville Water Company.

I will be brief. There has been a written statement mailed to the Atlanta Office.

LWC-1 First, the Louisville Water Company favors any action that would result in a decrease in any stream discharges of wastewater. This implies that we favor the LS2 type of option. But the concept of exactly how that solution to the problem is defined comes about is something that I question.

LWC-2 First, it seems that the favoring of LS2-A over LS2-C is one primarily of funding. And I'm sensitive to that

LWC-3 type of a situation. But it seems more appropriate that a problem be defined first and that solutions to that problem or alternate solutions to that problem likewise be developed and, then, based on the best alternative solution for the problem then that a funding level be sought for that type of problem.

It seems that in this case there has been a level of funding defined and then working backwards from that point to a solution that fits that level of funding, which, to me, is not good, sound

LWC-1. Comment noted.

LWC-2. The amount of federal funding would be the same for LS2a and LS2c due to the 1981 change in the Clean Water Act regarding the construction grants program.

LWC-3. The problem was defined first in the draft Project Background and Environmental Inventory Report published in September, 1980. Alternate solutions were then developed in the draft Alternatives Development Report published in January, 1981. The cost-effectiveness was determined for each alternative in the draft Alternatives Evaluation Report published in June, 1981. The most cost-effective alternative was selected in the draft Prefered Alternative Report published in July, 1983. Federal funding was not considered during the cost-effectiveness analysis.

engineering or good, sound planning.

That's basically the comments that we had. We do have a little bit of data that may not have been available to EPA regarding bacterial quality on Goose and Harrod's Creek which we have accumulated over the past couple of years and this information has been provided.

Thank you.

MR. ZELLER: Thank you. We appreciate your comments and, as I indicated earlier, comments that we receive at this hearing tonight and those that are submitted to us in writing will be responded to in the final Environmental Impact Statement and we appreciate your comments.

Next, I'd like to call on Tom Pryor.

MR. PRYOR: I would like to yield at this time to the next speaker.

MR. ZELLER: All right, sir.

The next speaker that I would have is Doctor Carl Sturm.

DOCTOR STURM: Just a

very brief statement, observation, what have you.

DCS-1 The priorities
puzzled me. When I see these areas that have
had this situation for twenty, twenty-five,
thirty, thirty-five, forty years and why they
fall so low on the priority list, it boggles my
mind. And the other observation: Out in the
DCS-2 triangle between LaGrange Road, Hounz Lane and
Whipps Mill Road, they have been trying to get
scattered site housing there, and so finally
they have been building these houses and all of
a sudden a sewer comes through -- of some
description, I don't know what -- and I don't
know where it's going. I don't know who
evaluated the situation, whether you folks did
it or whom. But it is puzzling to me why
taxpayers that have been living in that locality
for fifteen, twenty, twenty-five, thirty years
are having scattered site housing, but they are
helping to subsidize and these people are
getting sewers and the people who have been
sitting there all those years are being
bypassed. To me that is absolutely inexcusable.

MR. ZELLER: Thank

DCS-1. The Kentucky Natural Resources and Environmental Protection Cabinet creates the priority list for construction grants.

DCS-2. Local agencies establish priorities for sewering specific neighborhoods.

you. I think that's an issue that probably could be most appropriately addressed to the Metropolitan Sewer District. Right at this point in time I have no comment that I can make on that. I would comment generaly relative to the need for Construction Grants Funds. As you know, the federal government has appropriated for a number of years a flat amount of two point four billion dollars annually for the Construction Grants Program nationally and a great many of the taxpayers dollars have gone into these kinds of programs and the need still exists and we continue to see the need and we will for sometime. I share your concern on funding as I know the State of Kentucky does, but we continue to outstrip needs with dollars and continue to work on that.

Thank you for your comments.

The next speaker I have is Mr. Neal Webster.

MR. WEBSTER: I am just NW-1 representing myself tonight. And I would like to go on the record of encouraging the local agencies to consider the further alternative of

NW-1. Comment noted.

NW-1 building in for growth at this time. The additional cost at this time seems more cost effective than building another plant or expanding another plant at some future time.

That's my only comment.

MR. ZELLER: Thank you, Mr. Webster. That is a very appropriate comment.

The next speaker I have is Mr. K. C. Tsai with the University of Louisville.

MR. TSAI: I speak from my personal point of view. I am not representing University of Louisville.

MR. ZELLER: I don't believe we can hear you. Can you get a little closer to the microphone and speak a little louder, please.

MR. TSAI: I am speaking from my personal standpoint. I am not representing University of Louiville.

Can you hear me all right now?

MR. ZELLER: Yes.

MR. TSAI: I have

KCT-1 two question. Number one is the 201 alternative in the Draft is eliminated from consideration simply because it didn't include some future growth. KCT-2 My question here is: Can the 201 Alternative be designed based upon existing population and/or the population of 1990 so that it will be eligible for Federal funding? That is my first question.

My second question KCT-3 is: Can the Hite Creek Treatment Plant can be used to handle some of the flow to the regional treatment plant so that the cost of regional treatment plant would be less?

MR. ZELLER: Thank you. Thank you for your comments and your questions. I am not going to try and respond to those now. I don't think it is appropriate to try to do that. We will respond to those in the EIS that I indicated. I would suggest on the kinds of questions that you asked, after the hearing is over, if you come forward and discuss those with Mr. Mikulak and with Mr. Shogren, I think we have answers to those questions.

MR. TSAI: Okay.

KCT-1. The 201 alternative includes capacity in the regional sewer system for future growth and was considered. It is a local decision whether or not to build the 201 alternative. Federal funds would be available only to the extent that they would also be for the LS2a alternative.

KCT-2. Yes, that is the LS2a alternative.

KCT-3. The Hite Creek treatment plant would have to be expanded in order to treat sewage from the North County regional plant service area. Sewage treated at the Hite Creek plant requires advanced treatment, whereas secondary treatment is sufficient at the North County plant. Also, flows from the North County plant's service area would have to be pumped to the Hite Creek plant. All of these factors would make treatment at Hite Creek more costly than treatment at North County.

MR. ZELLER: The next speaker I have is Sylvia Watson.

MS. WATSON: I yield my time.

MR. ZELLER: Thank you.

The next speaker I have is Patricia Nightingale.

MS. NIGHTINGALE: I think I am going to say something after Ron's kind remarks about helping with citizen input. My name is Patricia Nightingale and I am representing the League of Women Voters. We are interested in citizen input and it has -- we believe that EPA has tried to put together a citizen participatory process with these two EIS's, the Mill Creek and the North County. It's a little hard for me to separate them since they both impact so heavily upon our county. So I'd like to say just a little bit about both of them.

As everybody probably understands or may understand from Mr. LWV-1 Shogren's remarks that this EIS is not so much an environmental study as a revision of the

(LWV-1. See next page)

LWV-1 county's Federal funding eligiblities, we believe.

We did have a 201 -- a master plan in Jefferson County. The 1964 master plan that Jefferson County was following, which was with some revision after the Clean Water Act changed into the 201 study, which was approved by local government, by the state and by EPA in 1975.

In 1977 with that decision to do the Mill Creek EIS that plan was effectively suspended.

I'd like to read to you what this present EIS -- if you don't have your full copy -- has to say about the 201 Plan.

It says, "On the 201 alternative construction funding will be split between EPA and local government with EPA providing a greater share than for any other alternative. Public health risks will be virtually eliminated as septic tanks and small treatment plants are abandoned. This alternative has greater technical reliability than the others. This alternative is probably

LWV-1. An act of Congress revised federal funding eligibility; the EIS recognizes these changes in the Clean Water Act.

the most acceptable to the local public. It has the strong endorsement of local agencies and the government."

LWV-2 However, despite those kind words, since 1977 for seven years EPA has spent nearly a decade in wrecking this county's master plan virtually beyond repair. In 1977 the Mill Creek EIS was begun. It was completed two years ago with mixed results for Mill Creek citizens. Citizens who were concerned about spending money for sewers which the perceived that they did not need were told that they would not have to suffer the disruption of sewers being built in their areas or to pay for those sewers. That was the good news. LWV-3 The bad news was that the underground aquifer was virtually written off. It is described on Page 122 of this current study as one of the major ground water resources in the United States. Citizens who have wells in southwest Jefferson County were told that they would have to hook up to Louisville Water Company water, they wanted safe drinking water, because there will be future and increasing pollution of that aquifer There will continue to be pollution of the surface

LWV-2. The North County EIS did not change the 201 plan, which can still be implemented by local agencies.

LWV-3. Through the Mill Creek EIS, it was determined that groundwater in southwestern Jefferson County was influenced by septic tank use, but that it is still usable as a treated drinking water source. EPA has neither the authority nor the intention of "writing off" the aquifer.

streams from septic tank seepages and from the discharges of package treatment plants in those areas.

Now, the North County. What have we come up with after five years in North County from 1979 to 1984? Here is the Preferred Plan and this is what the study says: "Construction funding will be split LWV-4 between EPA and local government. EPA share will be intermediate between LS1 and 201." That needs a little translation. What that means is that EPA's share of funding will be enormously reduced. To continue quoting, "Local LWV-5 enforcement activities for small plants will decrease to ten to forty percent of existing needs." What does that mean? Translation is needed. Instead of forty-nine small area package treatment plants it's figured that with growth in the area as of this Preferred Plan there will be nineteen small area plants. So the Health Department will only have to worry about forty percent as many malfunctions as we currently have. Also, only the people who live along Harrod's Creek. Goose Creek and Little Goose Creek will get most of the stream water

LWV-4. The summaries quoted here date from the draft Alternatives Evaluation Report published in 1981 and simply state the facts applicable at that time. Since then the Clean Water Act has been changed so that the use of federal funds for conveyance or treatment capacity beyond that necessary to serve existing needs at the time of grant award, or 1990, whichever comes first, is prohibited. The level of federal funding for the LS2a, LS2c, or 201 alternative would be the same under the new law.

LWV-5. There are 48 existing small-area plants, of which only 6 would remain under the LS2a alternative; only one of these discharges to Goose Creek, Little Goose Creek, or Harrods Creek, and that discharge is only 6,000 gallons per day. Whether or not there will be future small-area plants is a local decision, and enforcement would be up to the local Health Department.

pollution problems. Therefore, we have the next sentence, I guess, which says: "Public health risks from package plants and septic tanks will be greatly reduced or eliminated." I think that depends on where you live. "This alternative is intermediate..." To continue quoting "This alternative is intermediate in technical feasibility between no Federal action and the 201. This alternative is probably intermediate in public acceptance between no Federal action

LWV-6 and the 201." So after five years of study and some four hundred and ninety thousand dollars, we're getting a less attractive plan with less Federal funding. We have a generally

LWV-7 meaningless unuseable plan with no new information since 1977 except reported changes in the Clean Water Act funding, which we could have read for much less money.

This is an especially frustrating example of how the EIS process ought not to work or how surely it's not

LWV-8 suppose to work. It is true that the US taxpayer has been spared the burden of paying to help solve Jefferson County's health and environmental problems. We can't blame all of

LWV-6. No previous plans have contained any commitments of federal funds for the North County area; it cannot, be said, therefore, that the funding for LS2a is less than anything.

LWV-7. EPA has not revised the 201 plan. The 1981 Clean Water Act amendments are important new facts concerning federal funding.

LWV-8. This EIS has had no effect on what the U.S. Taxpayer has paid toward construction grant funding during this EIS process. The amount of funds provided for Kentucky has also not been affected by the EIS. These funds are spent according to the State's priority list. Even if the EIS had been completed earlier, the project's position on the priority list is such that construction grant funding is not expected until after 1987. Furthermore, this EIS has not prevented local agencies from taking actions with local funds.

LWV-8 those on EPA. But, at the same time, the local government and citizens have largely been prevented for seven years from taking any substantial actions to solve our own problems. Without a viable plan to follow, no doubt community agencies will in retrospect be found to have made many unwise decisions regarding future development.

LWV-9 The master plan that we have been following since 1964 has been suspended and is no longer possibly reparable. During these years, while nearly one million federal dollars have been spent in paying for the two EIS's, we've been given nothing very practical or useful to replace it. Incredibly the county is being faced now with the necessity of doing its own study, of trying to salvage some pieces of the destroyed plan and of finding a practical replacement for long-range community planning.

LWV-10 Surely NEPA and the Clean Water Act were never intended to sabotage the efforts of a community which was trying to follow a practical, technically feasible, affordable, long-range plan to solve its

LWV-9. The Mill Creek and North County EISs address the existing water quality problems of the community. The selected alternatives of the EISs propose practical and useful wastewater management approaches within the framework of current legislation. Long-range community planning is not an objective of the EIS process, but it is a responsibility of local authorities.

LWV-10. EPA concurs.

LWV-10 environmental and health problems; a county trying to provide for its future growth in a way that would avoid repeating its mistakes and creating similar problems in the future. But that's what's happened to Jefferson County and let's not neglect to tell it the way it has really happened. It has saved Federal dollars, as intended by Congress, in revising the Clean
LWV-11 Water Act. But this EIS has not given us a plan that is needed for managing environmentally sound growth in our community. It is not as
LWV-12 technically feasible as the plan that we once had. It is not as affordable as the plan that
LWV-13 we once had. It does not protect public health
LWV-14 or the environment as much as the plan that we once had. After seven interminable years and nearly one million dollars it's discouraging to realize that in our county, the Environmental Protection Agency has been the single greatest force during that time which has been working against positive solutions to our environmental and health problems, those problems associated with wastewater disposal within this county. Truly we have discovered that we cannot afford this kind of environmental protection.

LWV-11. Long-range planning for environmentally-sound growth is a local responsibility and was never an objective of the EIS.

LWV-12. The decreased feasibility of the LS2a alternative relates to the number of future small-area treatment plants assumed to occur if the 201 system is not built. Whether the small plants or the 201 system is built is a local decision.

LWV-13. The LS2a alternative is more affordable than the 201 alternative, as shown in Table 52 of the draft EIS.

LWV-14. The LS2a alternative eliminates existing public health and environmental problems. Planning for future environmental protection is a local responsibility.

(Applause)

MR. ZELLER: Thank you. The next speaker is Mr. Ralph Williams.

MR. WILLIAMS: I don't think there is no further comments necessary.

MR. ZELLER: The next speaker I have, I believe, is -- Winnie Hepler, indicated perhaps who wanted to make a statement. Have I read the name right?

MS. HEPLER: Yes. As usual, I generally support what EPA is trying to do. I think you are trying to salvage a situation that has been created by local politicians and developers and I think you're trying to make the best of a bad situation and I think the Preferred Alternative is the best we can hope for, probably, considering the economics of the day. I really appreciate the great care the Impact Statement has given to the environment and coordination with the Nature Preserves people and Park people and I hope that the local agencies will honor those when it comes time to do the building.

WH-1 And, where do we go from here? I mean, is it just a matter now

(WH-1. See next page.)

WH-1 of waiting until the State, Frankfort provides the money? I mean, and will it -- I mean, what WH-2 I'm trying to get it is EPA going to keep after us to improve the water quality or is it going to sit back and wait now? Could you tell me that?

MR. ZELLER: Let me ask Mr. Shogren to respond to that. I think the issue is with the State and on their priority list and he has already addressed that but let me -- if he wishes to do so, let me ask him to respond to that.

MR. SHOGREN: The Division of Water has as its major objectives clean water and maintaining water quality. If we found that streams within Jefferson County were being polluted to a degree that was unsatisfactory we would likely take some kind of enforcement action against the appropriate agency, which would normally be a point source discharger, an existing discharger. If it was pollution that was coming from septic tanks it could lead to some action being encouraged through the Health Department, being declared as a health risk. So that is, you know, that's a

WH-1. If local agencies decide to implement one of the regional sewer systems, MSD is responsible for designing the system and applying for construction grant funds. The availability of funds at that time will depend on federal appropriations and North County's position on the state priority list. Also see Mr. Shogren's comments following in the transcript.

WH-2. Primary responsibility for enforcing water quality standards lies with the State. Also see Mr. Shogren's comments starting on transcript page 48.

general response as to the way we deal with existing dischargers.

When it comes to the issue of available money the simple realities are that in my opinion local residents can no longer depend on the Federal Government to finance a major part of the construction cost for sewers. When you look at your other utilities, gas and electric, water, they are not financed by the Federal Government; they're financed by local residents who benefit from that. When you're talking about wastewater treatment, unfortunately, you're talking about something that people are less likely to worry about unless it becomes a real health problem. It's something they want to put off. It's something that in the early 70's was addressed at the federal level with a major program. You take Mr. Zeller's comments about two point four billion dollars is funded annually; that's for the whole country. And the needs that we have in the State of Kentucky right now are six hundred and sixty million dollars. In the last three, four, five years, just because of the pressures that we have at the Federal level, the

responsibility is getting turned back over to the states or to the local residents and you can't depend, in my opinion, on Federal dollars to make up a major part of what your local needs are. You can, perhaps, lobby the State; but right now the State does not have any assistance program. We propose that in the Division of Water, a simple ten percent Construction Grants Program. But you can read in the paper as to what the State situation is. And that's not one of the priority items right now.

I'll go back to my statement. There are a lot of communities in the State of Kentucky that are looking for Federal funds. We evaluate those needs on a priority basis according to the amount of pollution that they produce. It's a weighted formula that was determined based on EPA guidelines but essentially defined by us, went through a public hearing and a public comment process, and when we use that formula North County comes out seventh. It comes out pretty far down. But there are a lot of other smaller communities that are much farther down. The list A which we are talking about, twenty million dollars for large communities, there's something like seventy-five communities on it that have needs. Our county is quite high. It is seventh. There just isn't enough money. You can't continue to depend on the Federal Government as a source for constructing what is the need that you have for sanitary sewers.

WH-3

MS. HEPLER: Is there going to be any renewed enforcement of the pollution laws in the interim?

MR. SHOGREN: At the national level right now there is a great deal more emphasis that is being placed on enforcement. As far as the State is concerned we are going to be exercising a more stringent enforcement policy on local governments.

MS. HEPLER: Wonderful. Fine.

MR. SHOGREN: If you look at the last ten years, the success that the State has had has been very great, and our state is not much different from other states, in terms of enforcement actions against industries, because industries face the threat of being shut down, of having to stop producing what they are

WH-3. Primary responsibility for enforcing water quality standards lies with the State. Also see Mr. Shogren's comments following in the transcript.

selling. When it comes to municipal wastewater treatment facilities it's much more difficult, it's government versus government, which is always a different issue. It's difficult to levy penalties because those penalties simply fall back to the citizen who pays a monthly sewage treatment bill. It's difficult because at the Federal level alone you would have a program defined that says we're going to provide you money to help you solve the Construction Grants problems that you have. But right now at the Federal level there is a new emphasis on enforcement. You're going to see a policy, an enforcement policy statement coming out of State government within the next three months, if not sooner, that defines actions that we will be taking. It's not something that can be solved overnight. It's taken many years to be getting into this situation but it's going to be addressed in a much more open and up-front fashion than has been addressed in the past.

MS. HEPLER: That's what I wanted to hear: there will be an enforcement in the interim, so that construction can begin. Thanks so much.

MR. ZELLER: Thank you very much. Mr. Fry, you indicated earlier you wished to pass and your name has come up now.

MR. FRY: I will abstain.

MR. ZELLER: Thank you, sir. Sylvia Watson, did you wish to speak?

MS. WATSON: No.

MR. ZELLER: That's all of the cards that were given to me as a result of the registration on those individuals that wished to speak. If I have overlooked anyone, why, please raise your hand and let me know. Or if at this time you would like to speak, our purpose on holding this meeting -- yes, sir -- if you do speak. I would ask you to come to the podium and state your name for the record, please.

MR. JOHNS: My name is Elbert Johns from the community of Northfield. EJ-1 I had just had one question. What is the attitude of the Metropolitan Sewer District toward the LS2-A?

MR. ZELLER: We have

EJ-1. MSD considers LS2a "to be a satisfactory alternative," although they are concerned that federal funds may not be available by the time grant applications are made. See the MSD comment letter in Section 5.2.

not at this time received an official comment from MSD. We will hear from them as a result of that proposed alternative from the EIS and that will be a matter of record in the final EIS when it is promulgated. But at this time we have not received their official comments.

Is there anyone else?

Yes, ma'am.

Can I ask you to come to the podium, please, and state your name. Technically, we're not suppose to answer questions at these. We're suppose to develop a record, but I feel compelled to try to have you understand as much as you can about a very difficult process and we try to do everything we can.

MS. MOLESKY: I'm Mrs. Molesky of Windy Hills. You mentioned before that some of the people in the affected
M-1 areas were in on this, helping you all. Could the people be advised of who in their area was helping you?

MR. ZELLER: The names, I believe, are listed in the Draft Environmental Impact Statement and I have a copy of that here

M-1. See response following in the transcript.

which I will give you...

MS. MOLESKY: (Interrupting) I had never heard of anyone who was in on it. -1

MR. ZELLER: The process in developing an EIS is a very orchestrated and organized process. It involves scoping and meeting with people in the area and...

MS. MOLESKY: (Interrupting) Well, was it a picked few... Mr. Zeller: On Page 242 in the back of the EIS is a list of, it looks to me like, of about thirty or forty people who were involved. -1

MS. MOLESKY: How were they chosen? -1

MR. MIKULAK: The list of community members shown on Page 242 of the Draft EIS shows representatives of many of the fifth and sixth class cities. There were mayors and the chairmen or chairpersons of those communities, as well as representatives of several of our environmental groups, local agencies and state agencies.

MS. MOLESKY: None of the common ordinary people who reside in the 1

M-1. See response following in the transcript.

M-1 areas were consulted?

MR. MIKULAK: Well, in establishing a review committee such as this, we try to reach as many people as we can, and in those efforts in trying to reach, as you say, the common citizen, ordinary citizen, it is difficult to chose the people that...

MS. MOLESKY: (Interrupting) M-2 Because I have made contact with quite a few people in just the last couple of days. I have run into only one person who has had any trouble with their septic tank. Everybody else is satisfied.

MR. MIKULAK: In choosing the people, though...

MS. MOLESKY: (Interrupting) M-2 I chose these people just at random. I can choose any special ones like is in here that I see.

MR. MIKULAK: In chosing the people in representing the various cities we chose the chairmen or the mayors because they represent the larger constituency and can speak with the people.

MS. MOLESKY: Yes, but

M-1. See response following in the transcript.

M-2. According to documentation available at the Health Department and from an infrared aerial survey, Windy Hills has the third greatest septic tank failure rate in the study area: 26%. (For details see the draft Alternatives Development Report.) Within any area there will be people who do not have or who do not know they have problems with their septic tanks.

M-1 do they consult their people?

MR. MIKULAK: It's their responsibility. I can't speak for whether they consulted their constituents.

M-1 **MS. MOLESKY:** I don't think they consulted their people and that's why I am getting around. The people should have been consulted. We're the ones that are concerned.

MR. ZELLER: I totally agree. And, of course, you know the process is through your elected officials and I would urge you to let those people know of your thoughts.

Is there anyone else who would like to comment or make a statement at this time?

Yes, sir?

MR. SAWYER: My name is Cliff Sawyer. I am the mayor of the City of Northfield which has some of the problems that you have been talking about. I probably have missed a fine point here but between the monster called the Federal Government and their little monster called EPA and this thing we call -- whatever it is -- the natural resources that has

M-1. See response following in the transcript.

1 a new wonderful person heading it up. Where do we go, whom do we talk to to focus some of our concerns? We just are in a three-ring circus here. Can you tell me tonight who has got the lead role to do something about putting sewers, sewage systems in the North County area?

MR. ZELLER: I think we have discussed that earlier and I think the State has the lead role through their priority system in establishing sewer systems for this area. I think we discussed that.

-1 MR. SAWYER: So, Mrs. Baldwin, Shogren's boss is the person to talk to?

MR. SHOGREN: Let me comment in this way. If you wish to qualify for a limited amount of State dollars MSD has the lead role as a contact agency through the Division of Water to get those limited dollars. If you are talking about wanting to do someting in a shorter time frame than the kinds of time frames that I have indicated, the burden is on you. It's on you as a local citizen who has concerns for seeing improvements because you have a water pollution problem. Now that falls

CS-1. See Mr. Shogren's response following in the transcript.

back on local agencies. In Jefferson County you have a Metropolitan Sewer District which is committed to provide certain services out to the existing limit and ultimately to serve major parts of other portions of Jefferson County. That's the agency to contact.

On the other hand, you may have a local package treatment plant that serves your unit that's not properly being operated. If it's not properly being operated you can go to the local Health Department or you can come to the State Division of Water and we will take enforcement action to make sure it's properly operated.

Thank you.

CS-1 MR. SAWYER: Who do we talk to about putting into action and getting done your program LS2 or whatever it is? Who does that? MSD? You People? EPA?

MR. SHOGREN: The LS2 Option would be something that would be handled by a regional sewer district which in Jefferson County is right now the Metropolitan Sewer District.

MR. ZELLER: Thank

CS-1. See Mr. Shogren's response following in the transcript.

you very much. This has been, I think, a good hearing and an interested group and an involved group. Is there anyone else at this time that would like to make a statement?

If not, I will close the hearing. As I indicated earlier, the hearing record will remain open until February 29. Any written comments that we receive will be considered as a part of the record and they should be sent to Ron Mikulak. His name appears on the handout that you received earlier and the address is at the bottom of that agenda.

We thank all of you again for your participation in the hearing. Comments received this evening and during the comment period will be carefully considered and responded to in the final Environmental Impact Statement. And the final EIS will consist of the Agency's final decision, a summary of the Draft EIS and any pertinent additional information or evaluation developed since publication of the Draft, revisions to the Draft, comments received and EPA's responses and the transcript of this hearing.

Those of you who

commented tonight or submit written comments will receive a copy of the final Environmental Impact Statement.

Thank you again for your attendance and your participation. The panel will remain here for any questions if anybody would like to come and ask those.

Thank you again. I consider this hearing closed.

(MEETING ADJOURNED)

STATE OF KENTUCKY)
) SS
COUNTY OF JEFFERSON)

I, ALICE J. BALLARD, a Notary Public (Court Reporter) within and for the State of Kentucky at Large, do hereby certify that the foregoing DRAFT EIS PUBLIC HEARING was taken before me at the time and place as stated in the caption; that the said proceedings were taken down by me in stenographic notes and afterwards transcribed by me; that it is a true, correct and complete transcript of the said proceedings so had; that the appearances were as stated in the caption.

WITNESS MY SIGNATURE this the 29 day of February, 1984.

MY COMMISSION EXPIRES: August 14, 1984.

Alice J. Ballard
ALICE J. BALLARD
NOTARY PUBLIC
COURT REPORTER
State of Kentucky at Large

5.2 Written Comments

The hearing record remained open through February 29, 1984, to receive written comments. Letters were received after that date, but all comments have been included here. Table 7 is an index to the written comments, and Table 8 summarizes the general subjects mentioned by each commentor. The comment letters and EPA's responses begin on page 96.

TABLE 7. INDEX TO WRITTEN COMMENTS ON NORTH COUNTY DEIS

COMMENT CODE	PAGE(S)	COMMENTOR	NATURE OF COMMENTS
SCS-1.	96	U.S. Department of Agriculture, Soil Conservation Service	Quantification of farmland impacts
SCS-2.	96	U.S. Department of Agriculture, Soil Conservation Service	Soil erosion
LWC-1.	97	Louisville Water Company	Future deterioration of stream quality
LWC-2.	97	Louisville Water Company	Deterioration of groundwater quality
LWC-3.	98	Louisville Water Company	Stream water quality data
LWC-4.	98	Louisville Water Company	Supports LS2c alternative
LWC-5.	98	Louisville Water Company	Funding should not determine solution
LWC-6.	98	Louisville Water Company	Wastewater discharge effect on water quality
LWC-7.	98	Louisville Water Company	Prefers discharge location B in mid-river
LWC-8.	98-99	Louisville Water Company	Consider chlorination effects
EP-1.	110	Eugenia Palmer	Interim repairs to small-area plants
EP-2.	110	Eugenia Palmer	Septic tank maintenance
KHC-1.	111	Kentucky Heritage Council and The State Preservation Office	Provide preliminary archaeological report
KHC-2.	111	Kentucky Heritage Council and The State Preservation Office	Further assessments of archaeological properties
KHC-3.	111	Kentucky Heritage Council and The State Preservation Office	Apply National Register criteria
KHC-4.	111	Kentucky Heritage Council and The State Preservation Office	Consult with Advisory Council
HB-1.	112	Mrs. H. Blair	Needs sewers in Devondale
USPHS-1.	113	U.S. Public Health Service	On-site systems maintenance
USPHS-2.	113	U.S. Public Health Service	Effect on wells from on-site systems
USPHS-3.	113	U.S. Public Health Service	Regional treatment plant impacts

TABLE 7. (Cont.)

COMMENT CODE	PAGE(S)	COMMENTOR	NATURE OF COMMENT
LWV-1.	114	League of Women Voters	Federal funding is EIS's major concern
LWV-2.	114	League of Women Voters	Defines cost-effective and environmentally sound
LWV-3.	114	League of Women Voters	Quality of 1974 201 plan vs. LS2a
LWV-4.	114	League of Women Voters	1974 201 study re-affirmed 1964 Master Plan
LWV-5.	114	League of Women Voters	EPA has wrecked the 201 plan
LWV-6.	115	League of Women Voters	Mill Creek EIS
LWV-7.	115	League of Women Voters	North County 201 revision
LWV-8.	115	League of Women Voters	EPA's share of funding
LWV-9.	115	League of Women Voters	Small-area treatment plant malfunctions
LWV-10.	115	League of Women Voters	EPA's plan less attractive, meaningless, and outdated
LWV-11.	115-116	League of Women Voters	EIS prevented local action
LWV-12.	116	League of Women Voters	Cost increase during EIS preparation
LWV-13.	116	League of Women Voters	EPA chose federal dollar cost-effectiveness
LWV-14.	116	League of Women Voters	This EIS is useless
LWV-15.	116	League of Women Voters	Intent of NEPA and Clean Water Act
LWV-16.	116	League of Women Voters	The EIS lost more than it saved
LWV-17.	116	League of Women Voters	Spending of federal, state, and local dollars
LWV-18.	116	League of Women Voters	Long-range planning
LWV-19.	116	League of Women Voters	Technical feasibility of selected alternative
LWV-20.	116	League of Women Voters	Affordability of the selected alternative
LWV-21.	116	League of Women Voters	Public health and environmental protection
COE-1.	117	U.S. Army Corps of Engineers	Corps of Engineers projects
COE-2.	117	U.S. Army Corps of Engineers	Interceptor design and construction alternatives
COE-3.	117	U.S. Army Corps of Engineers	Corps of Engineers permit requirement
LJCPH-1.	118	Louisville and Jefferson County Department of Public Health	Material benefit to the community
LJCPH-2.	118	Louisville and Jefferson County Department of Public Health	Community support

TABLE 7. (Cont.)

COMMENT CODE	PAGE(S)	COMMENTOR	NATURE OF COMMENT
LJCPH-3.	119	Louisville and Jefferson County Department of Public Health	Failing septic tanks
LJCPH-4.	119	Louisville and Jefferson County Department of Public Health	Growth and urban development
LJCPH-5.	119	Louisville and Jefferson County Department of Public Health	PL92-500
LJCPH-6.	119	Louisville and Jefferson County Department of Public Health	Reduced federal funding
LJCPH-7.	119	Louisville and Jefferson County Department of Public Health	Future growth and development
NREP-1.	120	Kentucky Natural Resources & Environmental Protection Cabinet	Sludge management
NREP-2.	121	Kentucky Natural Resources & Environmental Protection Cabinet	Shively Wastewater Treatment Plant
NREP-3.	121	Kentucky Natural Resources & Environmental Protection Cabinet	Revision
NREP-4.	121	Kentucky Natural Resources & Environmental Protection Cabinet	Discharge limits for small-area treatment plants
NREP-5.	121	Kentucky Natural Resources & Environmental Protection Cabinet	Morris Forman Wastewater Treatment Plant
NREP-6.	121	Kentucky Natural Resources & Environmental Protection Cabinet	Revision
NREP-7.	121	Kentucky Natural Resources & Environmental Protection Cabinet	Supports LS2a alternative
KNPC-1.	122	Kentucky Nature Preserves Commission	Impacts and mitigative measures
KNPC-2.	122	Kentucky Nature Preserves Commission	Interceptor corridors
OSA-1.	123	Office of State Archaeology	Archaeological surveys
OSA-2.	123	Office of State Archaeology	Historic archaeological resources
OSA-3.	123	Office of State Archaeology	Grumet and Mistovich reference

TABLE 7. (Cont.)

COMMENT CODE	PAGE(S)	COMMENTOR	NATURE OF COMMENT
KDH-1.	124	Kentucky Transportation Cabinet, Department of Highways	Transportation facilities
MSD-1.	125	Louisville and Jefferson County Metropolitan Sewer District	Level of federal grant funding
MSD-2.	126	Louisville and Jefferson County Metropolitan Sewer District	Netherton Place development
MSD-3.	126	Louisville and Jefferson County Metropolitan Sewer District	Shively Wastewater Treatment Plant
MSD-4.	126	Louisville and Jefferson County Metropolitan Sewer District	Erratum
MSD-5.	126	Louisville and Jefferson County Metropolitan Sewer District	Revision
MSD-6.	126	Louisville and Jefferson County Metropolitan Sewer District	Revision
MSD-7.	126	Louisville and Jefferson County Metropolitan Sewer District	Revisions
MSD-8.	126	Louisville and Jefferson County Metropolitan Sewer District	Erratum
MSD-9.	127	Louisville and Jefferson County Metropolitan Sewer District	Revision
MSD-10.	127	Louisville and Jefferson County Metropolitan Sewer District	Errata
MSD-11.	127	Louisville and Jefferson County Metropolitan Sewer District	Revisions
MSD-12.	127	Louisville and Jefferson County Metropolitan Sewer District	Running Creek Wastewater Treatment Plant flows
MSD-13.	127	Louisville and Jefferson County Metropolitan Sewer District	On-site systems impact
MSD-14.	127	Louisville and Jefferson County Metropolitan Sewer District	Errata

TABLE 7. (Cont.)

COMMENT CODE	PAGE(S)	COMMENTOR	NATURE OF COMMENT
MSD-15.	127	Louisville and Jefferson County Metropolitan Sewer District	Household costs
MSD-16.	128	Louisville and Jefferson County Metropolitan Sewer District	Hite Creek Wastewater Treatment Plant flows
MSD-17.	128	Louisville and Jefferson County Metropolitan Sewer District	Interceptor lengths
MSD-18.	128	Louisville and Jefferson County Metropolitan Sewer District	Errata
MSD-19.	128	Louisville and Jefferson County Metropolitan Sewer District	Revisions
MSD-20.	128	Louisville and Jefferson County Metropolitan Sewer District	Archaeological surveys
DOI-1.	129	U.S. Department of Interior	Mineral resources
DOI-2.	129	U.S. Department of Interior	Septic tank abandonment
DOI-3.	129	U.S. Department of Interior	Resource category 2 mitigation

TABLE 8. SUMMARY OF GENERAL TOPICS COVERED BY WRITTEN COMMENTS

	AGRICULTURAL LAND/SOILS	SURFACE WATER/ GROUNDWATER QUALITY	SMALL-AREA TREATMENT PLANT/SEPTIC TANKS	HISTORIC/ARCHAEOLOGICAL/ RECREATIONAL RESOURCES	FUTURE GROWTH/PLANNING	CONSTRUCTION GRANTS/ FEDERAL FUNDS	1964 MASTER PLAN/ 1975 201 PLAN	COST	NEPA/CWA	PERMITS	SUPPORTS LS2a	IMPACTS/MITIGATIVE MEASURES	MINERAL RESOURCES	SUPPORTS SEWERS	ERRATA/REVISIONS
1. Soil Conservation Service	2														
2. Louisville Water Company		6	1		1										
3. Eugenia Palmer			2												
4. Kentucky Heritage Council and The State Preservation Office				4											
5. Mrs. H. Blair														1	
6. U.S. Public Health Service		1	1	1											
7. League of Women Voters			1		3	5	5	5	1						
8. U.S. Army Corps of Engineers										1		2			
9. Louisville and Jefferson County Department of Public Health					3	1	2		1						
10. Kentucky Natural Resources and Environmental Protection Cabinet			1							1	1				4

TABLE 8. (Cont.)

		AGRICULTURAL LAND/SOILS	SURFACE WATER/ GROUNDWATER QUALITY	SMALL-AREA TREATMENT PLANTS/SEPTIC TANKS	HISTORIC/ARCHAEOLOGICAL/ RECREATIONAL RESOURCES	FUTURE GROWTH/PLANNING	CONSTRUCTION GRANTS/ FEDERAL FUNDS	SUPPORTS LS2c	1964 MASTER PLAN/ 1975 201 PLAN	COST	NEPA/CWA	PUBLIC HEALTH	COMMUNITY SUPPORT	PERMITS	SUPPORTS LS2a	IMPACTS/MITIGATIVE MEASURES	MINERAL RESOURCES	ERRATA/REVISIONS
11.	Kentucky Nature Preserves Commission															2		
12.	Office of State Archaeology				3													
13.	Kentucky Transportation Cabinet, Department of Highways													1				
14.	Louisville and Jefferson County Metropolitan Sewer District		1	2	1		2											15
15.	U.S. Department of Interior			1												1	1	

United States
Department of
Agriculture

Soil
Conservation
Service

333 Waller Avenue
Room 305
Lexington, KY 40504

February 1, 1984

Mr. Ronald J. Mikulak, Project Officer
Environmental Assessment Branch
EPA, Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Mr. Mikulak:

This responds to an invitation to comment on the draft environmental impact statement for North Jefferson County, Kentucky, Wastewater Facilities.

SCS-1 We feel that quantification of farmland impacts in a more specific way is warranted. The acreage and amount of erosion are important. The potential immediate impact of construction on sloping areas is damage to the land resource from high rate erosion. This problem can be very pronounced where the path of the conveyance lines goes down slope, unless special care and effort are taken to prevent it. Further impacts are obviously possible as water-borne erosion products leave the construction sites and enter the stream systems.

SCS-2 We hope that EPA will display a strong commitment in the EIS to minimize erosion impacts by requiring practical erosion control during and following soil disturbance activities.

Sincerely,

RANDALL W. GIESSLER
State Conservationist

ENVIRONMENTAL ASSESSMENT BRANCH
FEB 06 1984

The Soil Conservation Service
is an agency of the
Department of Agriculture

SCS-1. The regional system will affect farmlands due mainly to interceptor construction. Most of the interceptors will be constructed through the wooded stream valley and will not affect farmlands. Approximately 5 km (3 mi) of the main interceptor along the Ohio River (NC) will disrupt 7 ha (18 ac) of farmland during construction. Since this farmland is relatively flat, erosion should be minimal.

SCS-2. EPA agrees that minimizing erosion impacts by employing practical erosion control during and following soil disturbance is important. The development of an erosion and sediment control plan for the construction of wastewater facilities is routinely required as a grant condition. Design, implementation, and enforcement of erosion control measures are typically local and state responsibilities.

LOUISVILLE WATER COMPANY
435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202
502-582-2431

February 6, 1984

RECEIVED
FEB 1 0
EPA-REGION IV
ATLANTA

Ronald J. Mikulak, Project Officer
Environmental Assessment Branch
EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: Draft U.S. E.P.A. Environmental Impact
Statement for North Jefferson County
Kentucky Wastewater Facilities of
December 1983

Dear Sir:

The Louisville Water Company engineering staff has reviewed the EIS for the north county waste water treatment facilities.

LWC-1 From a public water supply point of view, the concept of problems in the north county area differs somewhat from those from a general sanitary view point. Deterioration of stream quality in Goose Creek and Harrods Creek can result in a subsequent deterioration in water quality at the Louisville Water Company Crescent Hill water intake structure. This problem would be expected to be caused by failing septic tanks and improperly operated package treatment plants. Noting that the north county area is identified as the primary growth area for Jefferson County in the next 20 years, the problem with future deterioration of stream quality would likely be magnified unless remedial action is taken.

LWC-2 A secondary problem that affects the potential utilization of water resources available to the Louisville Water Company involves inappropriate use of the aquifer between the B. E. Payne Plant and the Crescent Hill Plant. Although this aquifer is not currently used for water supply, several investigations into this potentially useful source of water in recent years indicates the interest that the Louisville Water Company has in the aquifer. As has been discussed with Jefferson County Public Health officials in the past, the Louisville Water Company would like to retain this stretch of the aquifer for a possible future water supply. Thus, any actions taken that would result in a planned deterioration of water quality in this aquifer should be discouraged.

The Louisville Water Company has accumulated water quality data on the Ohio River over an extensive time period. Data provided graphically in the

LWC-1. Remedial action to correct existing problems is provided by the LS2a alternative. Wastewater management planning for future growth is a local responsibility.

LWC-2. The selected alternative does not take any actions that would result in a planned deterioration of water quality in this aquifer. For the selected alternative, existing wastewater management systems in the area between the B.E. Payne plant and the Crescent Hill plant will be sewered by the regional system. Discharges to the groundwater from failing septic tanks will be virtually eliminated by the LS2a system. Wastewater management for future growth is a local responsibility.

LWC-3 Appendix indicates that long term bacteria counts in the Ohio River remained basically stable until the 1975-1976 calendar year. Due to the extremely high bacteria counts found during this period, the Louisville Water Company initiated further investigations to determine possible causes of this excursion from baseline. (See Appendix) These data indicate that the bacterial quality of the Ohio River at the B. E. Payne Plant (up stream of Goose Creek and Harrods Creek) was generally of better quality than that at the Cresent Hill intake (down stream Goose Creek and Harrods Creek). While these data indicate that the bacteria quality of Goose Creek and Harrods Creek is generally poorer than than of the Ohio River, it could not be concluded that these two creeks were the sole cause of the water quality deteriuration experienced by the two plants.

LWC-4 In consideration of the problem definition, the Louisville Water Company feels that the LS2c alternative provides the most logical and engineeringly sound soulution to the problem. The concept of LS2a does not recognize problems that are likely to occur with the continued proliferation of package wastewater treatment plants in the north county area. Any plan that considers action toward alleviating existing problems without due consideration of future problems does not represent sound planning or engineering judgment. It is recognized that the constraints placed upon federal funding do not allow

LWC-5 for facilities to be planned for future growth. It is felt, however, that the availability of funding should not be the ultimate determinate in the solution of a problem. It is far more prudent to define the desired level of effort (goals) and to seek appropriate funding to satisfy these goals.

LWC-6 The Louisville Water Company considers any waste water discharge that may adversely affect water quality at either of its intakes to be unacceptable from a public health standpoint. The discharge from the proposed regional

LWC-7 waste water treatment plant at either location A or B (figures 10, EIS) would be unlikely to affect water quality at our Crescent Hill facility under normal hydraulic conditions. However, the possibility of reverse flows under low stream flow conditions and the possibility of contaminants from discharge point A reaching the Louisville Water Company Crescent Hill intake have been sited in a earlier MSD report (See attachment). Therefore, the discharge location at point A is considered undesirable.

The discharge at location B would be more desirable than that at location A, in that the distance between the discharge and the Crescent Hill intake is nearly doubled from that at discharge point A. It would be desirable to extend the discharge at point B into the higher velocity section of the stream, as opposed to having a shore discharge. Such action would further reduce the possibility of wastewater discharge affecting water quality at the Crescent Hill location.

LWC-8 In the treatment of wastewater for surface stream disposal consideration should be given to the over all effectiveness of chlorination on the quality of water for all intended purposes. A good deal of controversy has developed over the effectiveness of waste water chlorination in the disinfection of pathogens. It is often feared that chlorination simply destroys those indicator organisms which are highly susceptible to chlorine, while not necessarily destroying virus and more chlorine resistant pathogens.

LWC-3. The water quality data provided graphically in the Appendix that accompanied the Louisville Water Company's comment supports previous information published in Task Reports for this EIS.

LWC-4. The EPA selection of the LS2a alternative does not preclude a local decision to build a regional system that provides for future growth and avoids a proliferation of package plants. Future wastewater management is a local responsibility.

LWC-5. Selection of the LS2a alternative recognizes the maximum extent of federal funding permissible by federal law. Due consideration of future problems is a local responsibility that is not precluded by this decision. EPA feels, however, that the availability of funding, local or federal, does ultimately determine the solution to a problem. The LS2a alternative will solve the existing problem; planning to avoid future problems is a local responsibility.

LWC-6. EPA concurs.

LWC-7. B is the recommended discharge location for the North County regional plant. Comments on the discharge location of the North County plant were solicited from the Louisville Water Company in a letter of February 25, 1982. The Water Company responded in a letter of April 16, 1982, that they would not be opposed to any discharge point downstream of Beargrass Creek. Discharge location B is approximately 1 mile downstream of Beargrass Creek.

Local-scale hydraulic modeling of the Ohio River was not a part of the EIS. Based on available information, a mid-river discharge is not cost-effective due to the high cost and effect on navigation. If the Louisville Water Company has done modeling to show that the condition described in the letter can occur, then the actual discharge point can be changed during design.

LWC-8. Chlorination is an accepted method for disinfection of sewage. It was used in this EIS for developing costs to be representative of actual construction costs. The most cost-effective method of disinfection, as well as other treatment processes, should be determined during design of the North County plant.

8 Wastewater chlorination has been identified as a potential source of organic contaminants that may affect human and marine life.

Louisville Water Company appreciates the opportunity to comment on this EIS, and hopes that the comments and data are helpful in the identification of the problems as viewed by the Louisville Water Company.

If you have any further questions, please feel free to contact me.

Yours very truly,

Frank C. Campbell
Vice President-Chief Engineer

FCC/htl

Attachments

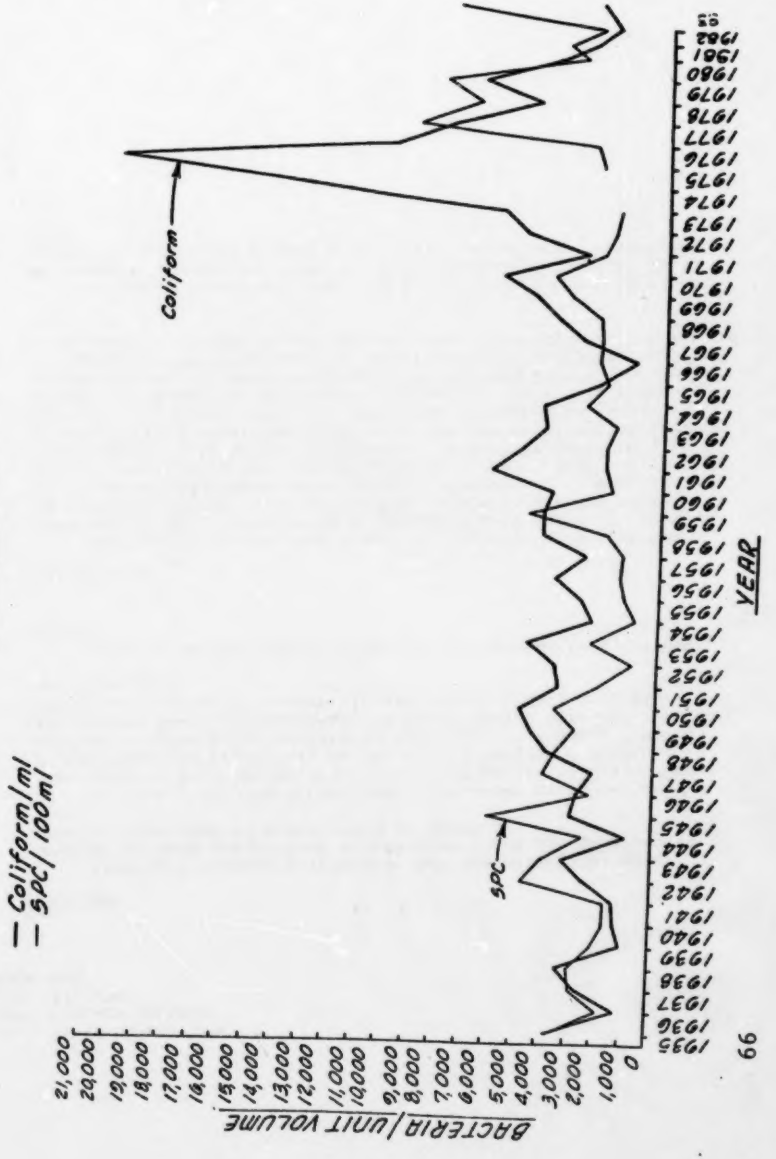
APPENDIX

Item 1: Yearly Average Bacterial Quality of Ohio River at Crescent Hill Intake

Item 2: LWC Interoffice memo on samplings of Goose & Harrods Creeks from From W. E. Vaughn to S. A. Hubbs: 11/17/81

YEARLY AVERAGE BACTERIAL QUALITY
1935-1980-83

Fig 1



LOUISVILLE WATER COMPANY

(INTER-OFFICE COMMUNICATION)

November 17, 1981

To Steve Hubbs/File

From Willard Vaughan

Re: Bacterial Comparison Between Crescent Hill Filter Plant and B. E. Payne Water Treatment Plant

Introduction

A review of past data has indicated that the CHFP bacteria levels are higher than that of BEPWTP. Figures 1-4 graphically show this for four different tests over an 18-month time period. The major difference in the two sets of data can only be accounted for by some form of continuous contamination.

The theory was proposed that the contamination was coming from some specific point source. There are only two major point sources between BEPWTP and CHFP; Goose Creek and Harrods Creek. Initial biological sampling was performed on August 10 and September 14 with a full scale sampling program begun on September 28 to test the theory.

Methods

Goose Creek samples were taken from the old River Road Bridge which is just a few feet north and parallel to the current River Road Bridge. Harrods Creek samples were taken from the south end of the docks at Captain's Quarters restaurant off River Road. The one lane bridge of River Road crossing Harrods Creek was not used because it was considered unsafe by the sampler due to traffic. Samples were taken basically once a week, and dates are indicated on the attached Figures.

A sample bomb was used to raise the sample from about two feet below the surface. Two 100 ml autoclaved sample bottles were first filled by the autoclaved sample bomb for biological tests. Then, a 1.5 liter sample bottle for wet chemistry, a 250 ml sample bottle with approximately 5 ml of H_2NO_3 for metals, a 500 ml brown, screw cap bottle for trihalomethane potential, one clear, teflon lined crimp capped bottle with thiosodium sulfate for the ORSANCO EWODS Program. Organic sampling was also begun on BEPWTP Raw Water to provide more consistent datum points than what is normally taken.

Results

Figures 5 through 8 indicate that the biological water quality of both Goose Creek and Harrods Creek are of a poorer quality than that of either CHFP or BEPWTP.

Figures 9 through 11 incidate that Goose Creek is predominantly a groundwater fed stream, due to the higher hardness. Higher Fluoride levels may be due to discharges of domestic wastewater previously treated by the Louisville Water Company. The higher levels of phosphate indicate sewage effluent. Harrods Creek water quality is more closely associated to Ohio River water quality.

Results of the organic data will be covered in a follow-up report.

Discussion

Biological samples are taken and analyzed daily for both CHFP and BEPWTP. On Figures 5 through 8 only the daily results of CHFP and BEPWTP which correspond to the days which Goose Creek and Harrods Creek were sampled are shown. It was originally thought that this may be incorrect due to fluctuations which occur daily in the Ohio River. Figure 12 indicates the Standard Plate Count for BEPWTP for the months of August through October. It can be seen that the line indicated on Figure 5 follows a trend line of Figure 12 closely. So it was found to be unnecessary to graph each day for CHFP and BEPWTP. A check was made to make sure that the points of CHFP and BEPWTP graphed on Figures 5 through 8 were not maximum or minimums of the week in question.

Fluoride levels are shown on Figure 11 for the Ohio River as opposed to CHFP and BEPWTP. This is because Fluoride is a stable compound and varies very little within a local environment.

Conclusion

Hydrological Data

The deterioration of the water quality of the Ohio River is probably directly related to the amount of discharge from Goose Creek and Harrods Creek. It is significant that during the sample period the weather was extremely dry. This most likely led to low flow of both streams. This cannot be verified because there is no hydrological data taken on Goose Creek. A hydrologic sampling station does exist on Harrods Creek. This station is located in the headwaters, however, which is a considerable distance from the sampling site on River Road. Without this direct hydrological data, it will be necessary to estimate stream discharges from the two streams based upon rainfall.

Note: Flow estimates based on stream x-section and velocity initiated 12/2/81 for Goose & Harrods C.

Hydrological flow data is available for the Ohio River through the Corp of Engineers at McAlpine Dam. There has not been any form of modeling performed to analyze the flow patterns of the River between McAlpine Dam and the BEPWTP. It is believed that the flow may be channelled (due to streamline flow), flowing along the south side of the Ohio River (Kentucky side) into which both Goose Creek and Harrods Creek feed.

Water Quality

Both creeks have problems in regard to water quality. Goose Creek has at least three sewage treatment plants which, even if working correctly, would have a major impact on the stream. Boating is heavy on Harrods Creek as can be seen by the large number of boats docked to the banks.

Even taking all this into consideration it does not seem to be enough to provide the amount of deterioration in the Ohio River, as indicated in Figures 1-11. It is possible that there are other sources of pollution other than the point sources of Harrods Creek and Goose Creek. An example of this is the boats docked at the Louisville Boat Club. Laws have been inacted to prevent any discharge but it is believed these laws are often broken. This type of pollution cannot be measured, only estimated, and not too accurately.

Recommendations

Sampling which had been on a weekly basis is now on a bi-weekly basis. But this data can only give indications of the overall problem source. Stream flow models for Goose Creek and Harrods Creek should be developed to give a better understanding of the amount and velocity of their flows. The Ohio River near the creeks (if possible) should be modeled to see if there is a channel due to streamline flow.

The modeling of the creeks and the Ohio River will take money and time; but, a clear unhypothetical answer can only be found by this type of investment.

Willard C Vaughan
Willard C. Vaughan

WCV/cr

Note: Flow "channelling" visually observed 12/1/81 by following highly turbid discharge from Goose Creek into the less turbid Ohio. It is apparent that stream channelling is occurring along the KY shore
SDH

Fig 1: RAW WATER STANDARD PLATE COUNTS

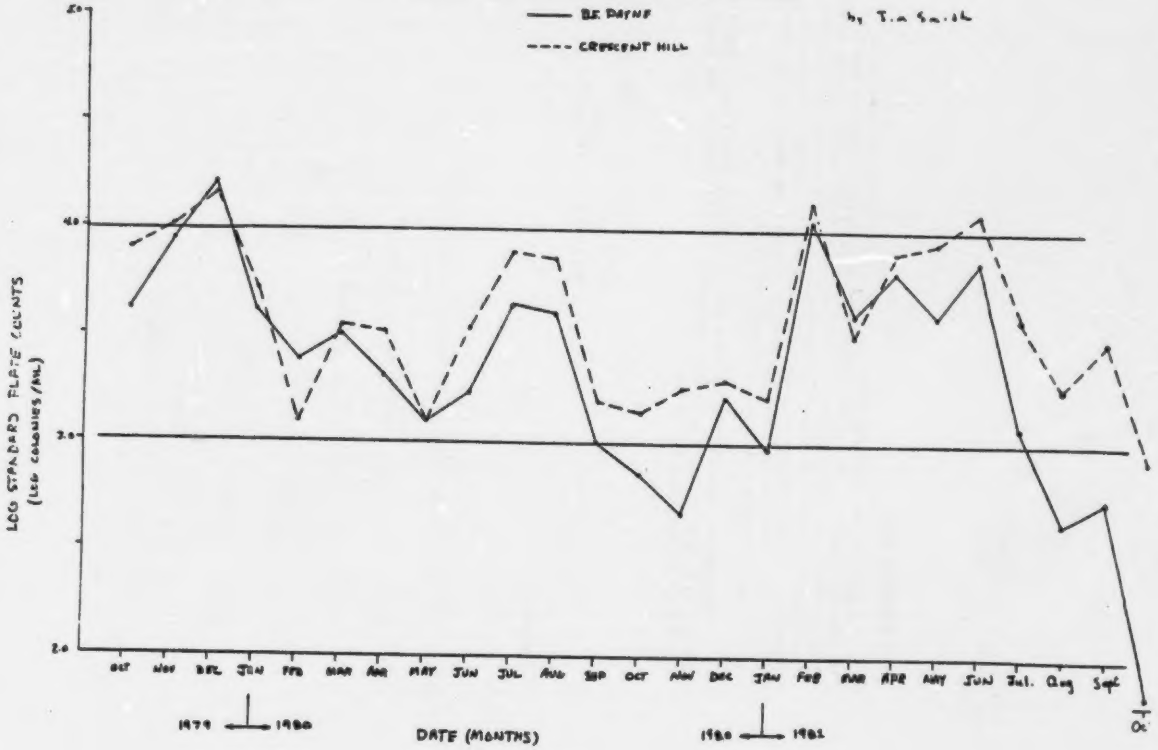


Fig 2: RAW WATER COLIFORM COUNTS

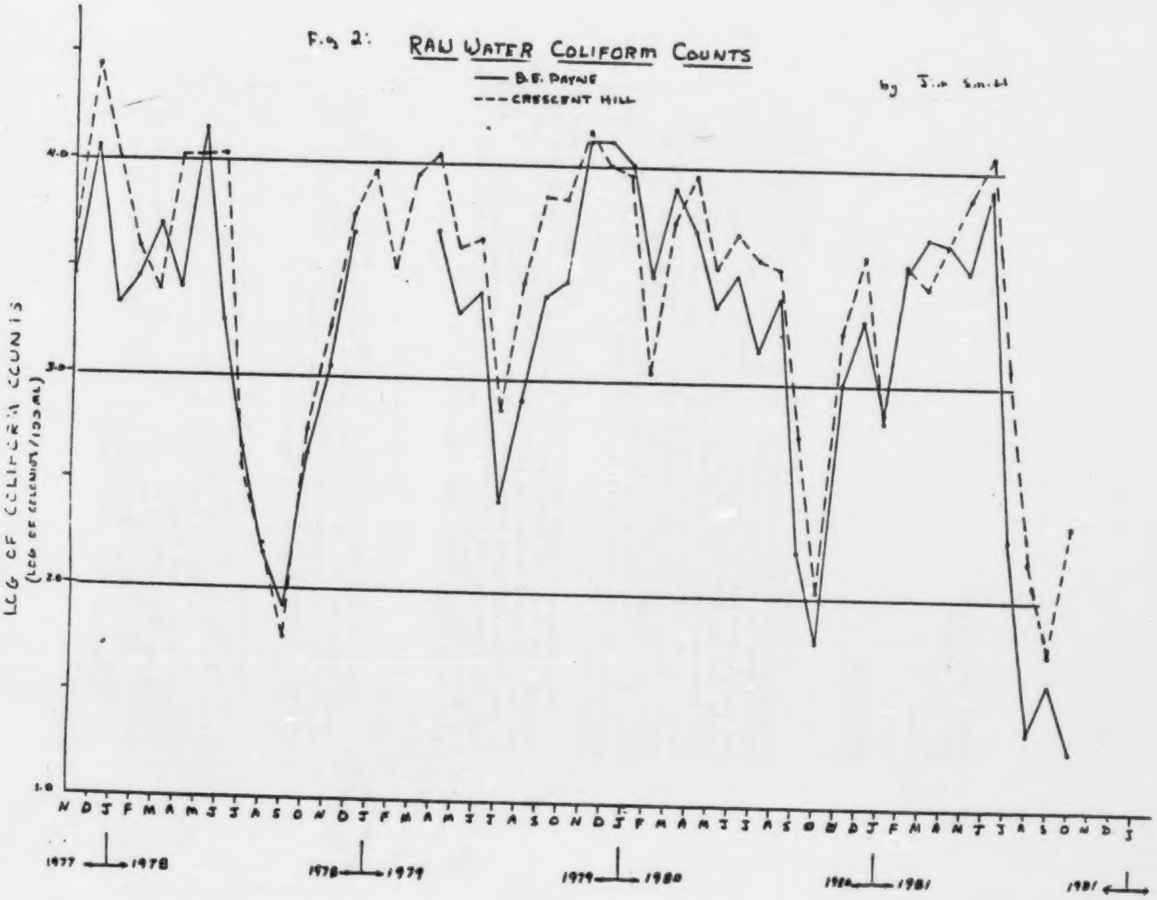

B.F. PAYNE
CRESCENT HILL
by Jim Smith
4.0
3.0
2.0
1.0
LOG OF COLIFORM COUNTS
(LOG OF COLONIES/100 ML)
N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1977 → 1978
1978 → 1979
1979 → 1980
1980 → 1981
1981 ←

Fig 3: RAW WATER FECAL COLIFORM COUNTS

by Jim Smith

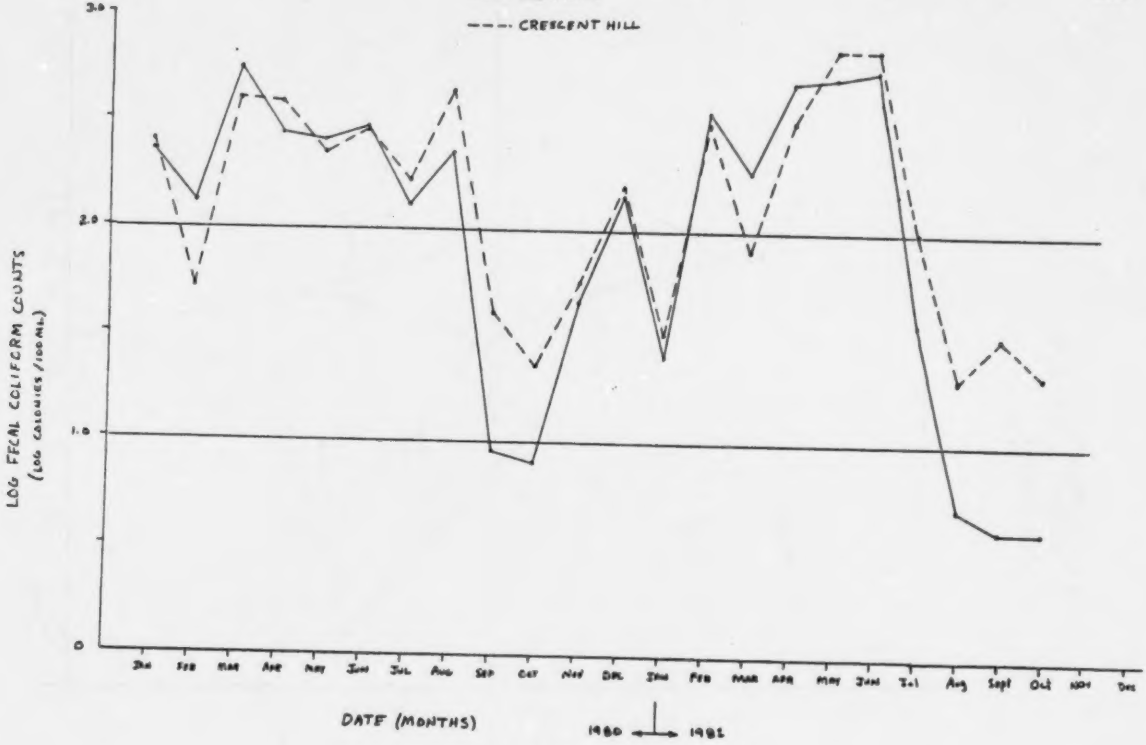


Fig 4: RAW WATER FECAL STREPT. COUNTS

by Jim Smith

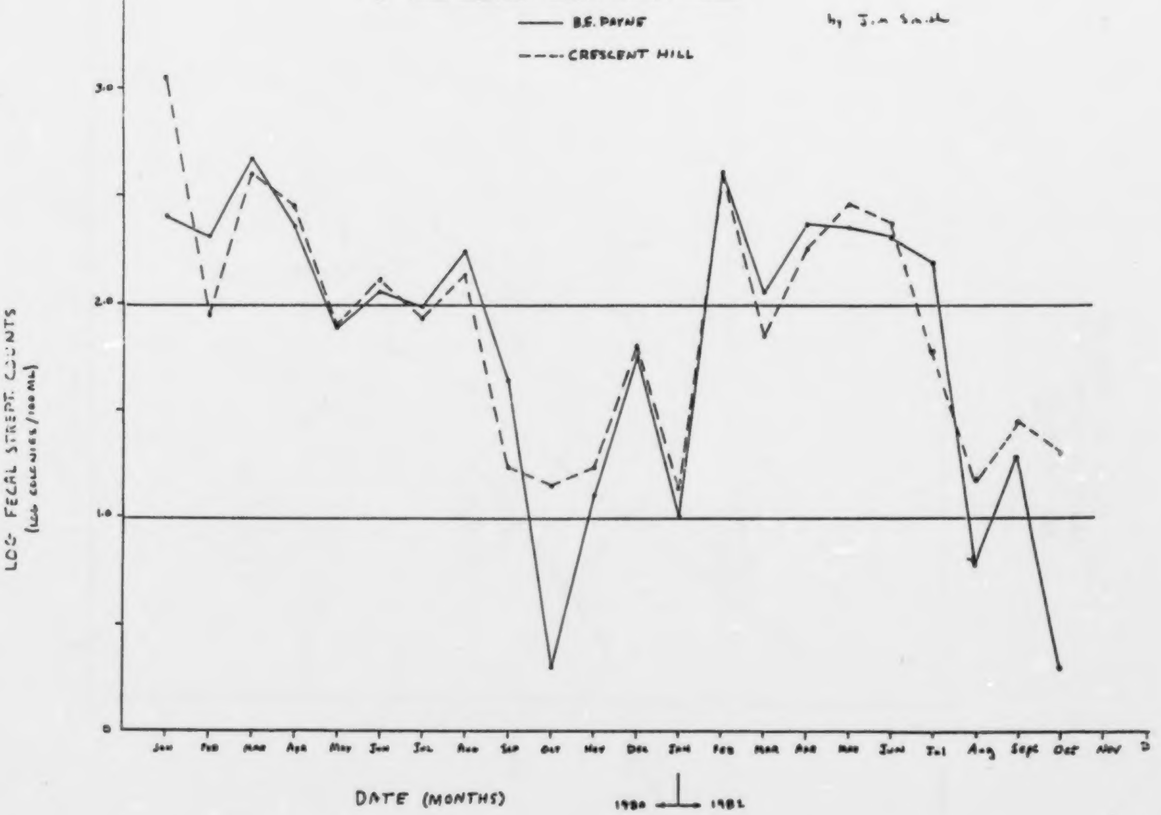


Fig 5: Standard Plate Count for four Points on Ohio River and Tributaries.
WEV

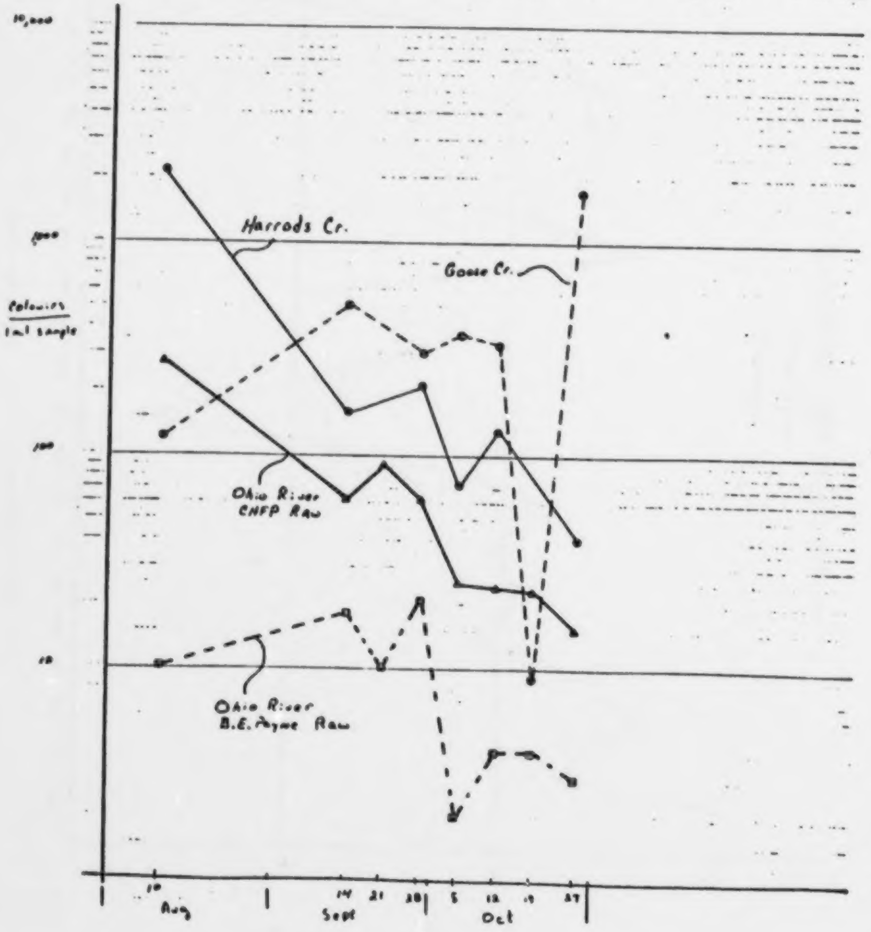


Fig 6: Coliform Count for four Points on Ohio River and Tributaries
WEV

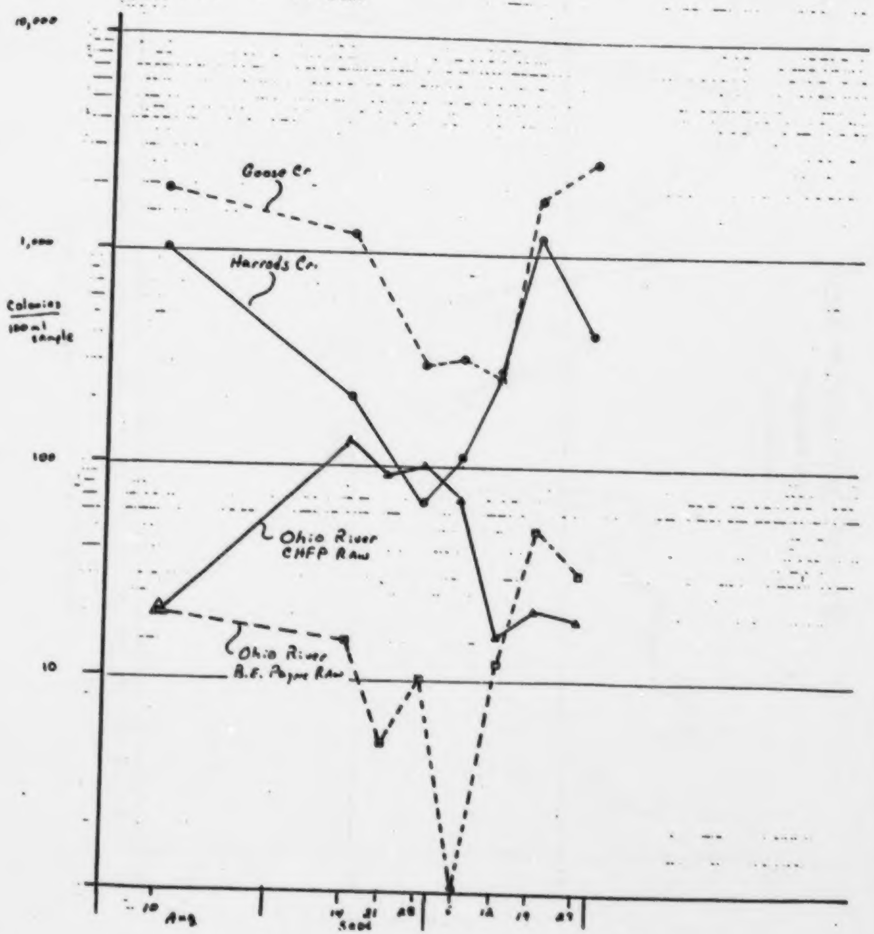


Fig 7: Fecal Coliform Count for Four Points on Ohio River and Tributaries

WEV

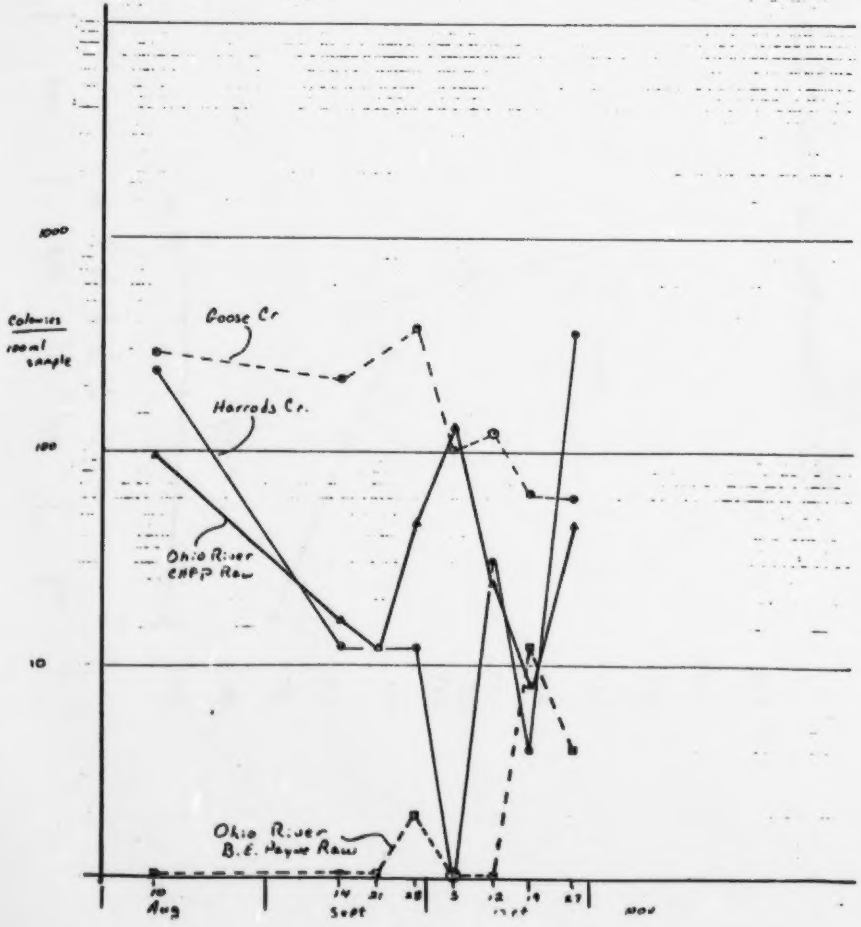


Fig 8: Fecal Strep. Count for Four Points on Ohio River and Tributaries

WEV

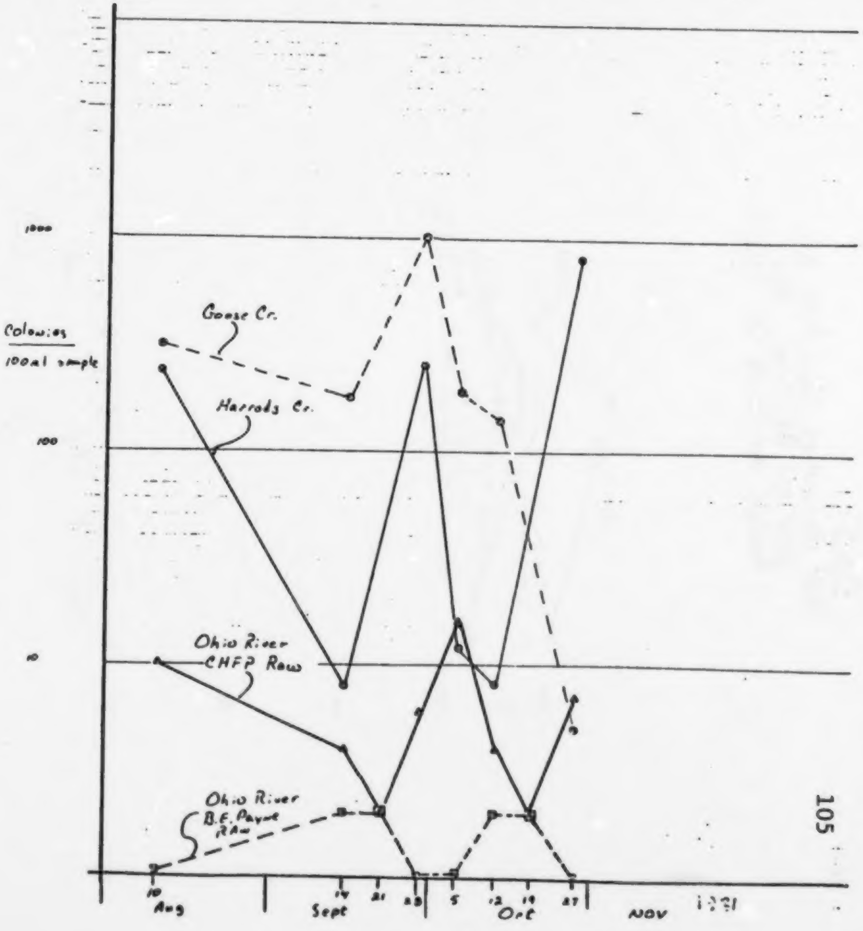


Fig 9:

Total Hardness of Ohio River at CHFP and B.E. Payne. Also Goose Cr. and Harrods Cr. Hardness

wev

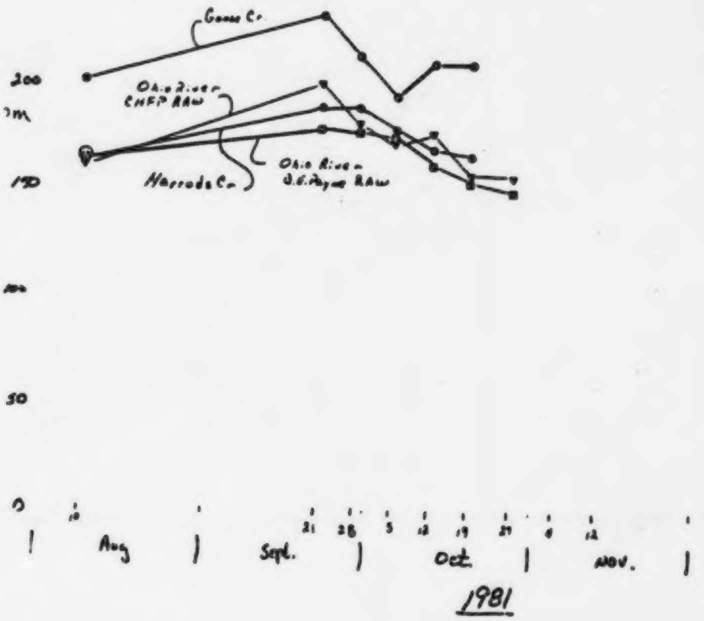


Fig 10:

Total Phosphates for Goose & Harrods Creeks.

wev

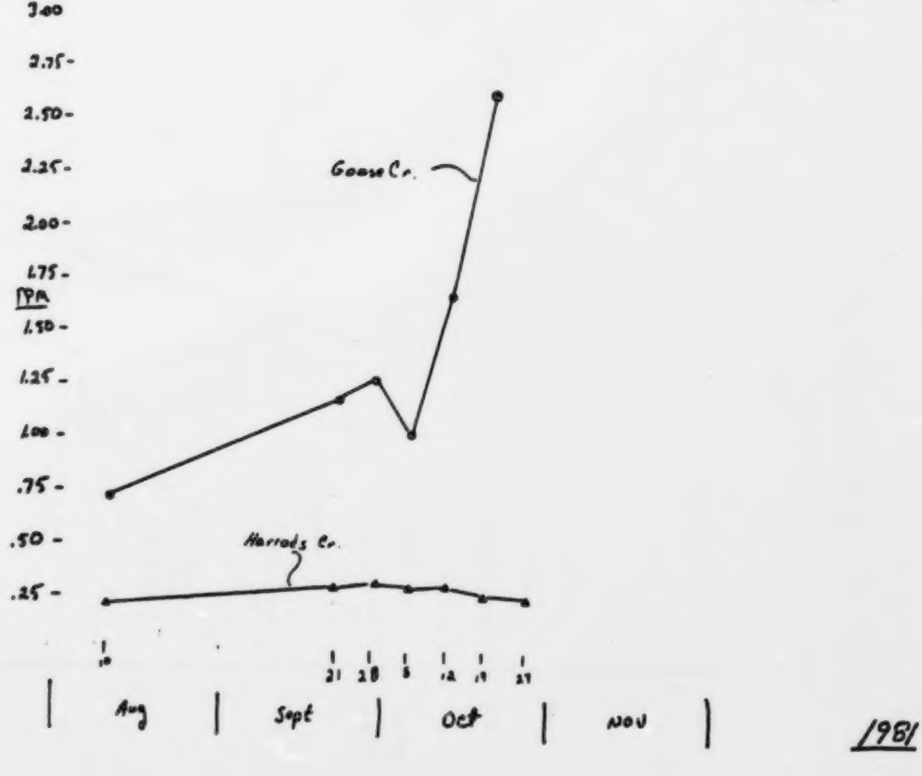
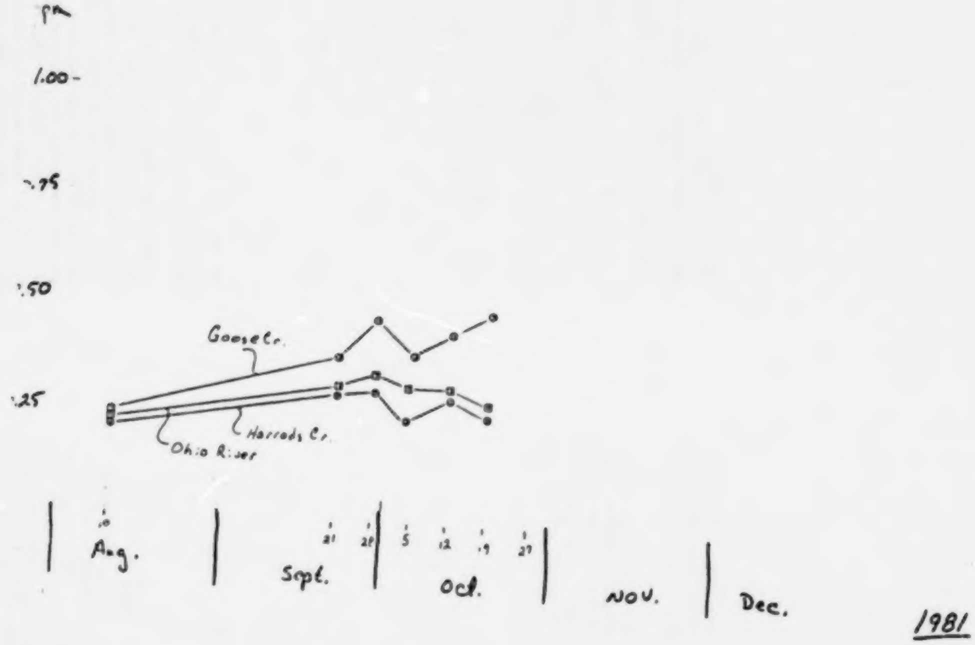


Fig 11:

Fluoride levels for Goose and Harrods Creeks And the Ohio River

wev



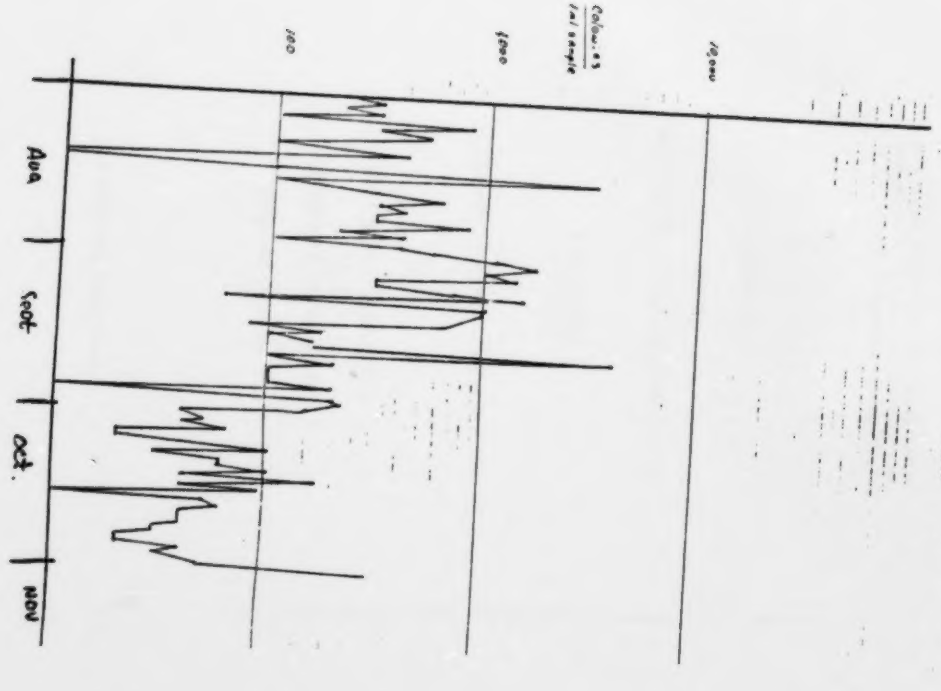


Fig 12:

Daily Standard Plate Count of B.E. Payne Raw

wev

ATTACHMENT

Excerpt from 1940 MSD report discussing
the possibility of reverse flow on the
Ohio River near Bluegrass Creek.

REPORT

OF THE

COMMISSIONERS OF SEWERAGE

OF

LOUISVILLE

(Incorporated)

TO

HONORABLE JOSEPH D. SCHOLTZ
Mayor

UPON

INTERCEPTING SEWERS
AND
SEWAGE TREATMENT

November 19, 1940

LOUISVILLE, KENTUCKY

---

ter-Works Intake. Above the
water should be of such a qual-
afe for drinking after a high

ions, there were high monthly
nes during four months of the
were made, the high counts
per 100 c.c. The average of
c.c. as reported in Chapter X.
as reported by the Louisville
1935 to 1939, ranged from 1,0:1

average coli-aerogenes index
water, taken from the Merri-
llowing table. It is seen that
he index varied from 3,100 to
idual yearly averages outside

RRIMACK RIVER WATER AT
NT, LAWRENCE, MASS.

Average coli-aerogenes index per 100 c.c.*	Year	Average coli-aerogenes index per 100 c.c.*
5,700	1932	5,100
6,700	1933	5,500
4,500	1934	14,200
4,200	1935	11,500
7,400	1936	19,500
5,050	1937	12,000
5,200	1938	16,500

Dept. of Public Health.

Lawrence in 1936, Metcalf &
quotation that it would be desir-
water supply from an expd-
if the city were not ready to
eveloping a new source, "then
nt volume of river water so as
tractive supply should be con-

structed immediately." The works required provided floc-culation, activated carbon treatment, pre- and post-treatment with lime, sedimentation after coagulation, rapid sand filtration and pre- and post-chlorination, in addition to the existing slow sand filtration and chlorination.

In the case of Lawrence, the principal pollution comes from the untreated sewage of Lowell, a city of about 100,000 some eight miles upstream. In this case the pollution indicated by a given coli-aerogenes index is worse than that at the Louisville intake, because of the human origin of a greater proportion of the former.

For further comparison reference is made to a study of a number of municipal water purification plants on the Great Lakes and the Ohio River, by H. W. Streeter (4), who concluded that "for water requiring filtration, the average B. coli index of the raw water as delivered for treatment, when considered over a significantly long period of time, such as a year, should in no case exceed 5,000 per 100 c.c., and the B.coli index of such a water should not exceed 20,000 per 100 c.c. during more than 5 per cent of the period considered." Accordingly, the raw water at Louisville's intake is approaching the limit set by Streeter.

Considering the sources and extent of pollution of the Ohio River at Louisville, the high degree of treatment given the water, and the city's good typhoid record, we believe that the water flowing down the Ohio River to the intake is satisfactory at present. Consideration is given below to the effect of reversal of flow in the river.

Upper Pool below Water-Works Intake. Ordinarily the extent of pollution at the water-works intake increases as the river flow increases due to greater surface runoff, scouring out of deposits on the bottom of the river, and shorter time of travel for pollution from upstream with correspondingly less opportunity for sedimentation and death of bacteria. Occasionally, however, high counts have been observed at the intake at times of extremely low river flow. This suggests the possibility that sewage from Louisville may at such times be carried upstream to the intake by a reversal of flow in the river.

In Table 20 is given the average daily river discharge on days when this was 5,000 c.f.s. or less together with the estimated minimum flow past the dam during these days for July and August, 1930, as estimated by the Corps of Engineers. This table shows 26 days when the daily flow was from only 2,100 to 5,000 c.f.s. and many days when the minimum flow past the dam was reported to be as low as 300 to 400 c.f.s. for several hours.

The low minimum rates of flow past the dam, 300 to 400 c.f.s., are caused by the shut-down of the power plant. On certain days when the power plant was shut down the records do not show any flow in the river, but it is estimated by the Corps of Engineers that there was a flow past the dam of 300 c.f.s., during these periods.

Computations which take into account the direction and velocity of the wind and the river velocity indicate that, with the river elevation maintained at pool stage for navigation, with very low river flow and with only gentle to moderate upstream winds, the occurrence of a reversal of flow in the river for a sufficiently long time to carry sewage now reaching the upper pool to the water-works intake is a distinct possibility.

On account of the possibility of reversal of flow in the river, we recommend that for the protection of Louisville's water supply the sewage from outlets now discharging into the upper pool be intercepted before its discharge, and conveyed to a point below the dam rather than treating this sewage at a plant so located that its effluent would discharge into the upper pool.

Lower Pool. New Albany obtains its water supply through an intake located just below the Portland Locks and downstream from the discharge of much of the sewage of Louisville. It is certain that sewage from Louisville must reach the New Albany intake.

The purification plant for the New Albany supply provides preliminary sedimentation, pre-chlorination, flocculation,

TABLE 20.—AVERAGE AND MI
AT LOUISVILLE AT TIMES WI
5,000 C. F. S. OR LESS, DURIN

Date, 1930		Average daily river discharge (c.f.s.)
July	13	5,000
	19	4,000
	20	2,800
	21	3,900
	22	2,800
	23	2,800
	25	4,900
	31	3,000
Aug.	2	2,500
	3	4,500
	5	4,000
	7	2,950
	10	3,500
	12	2,100
	13	3,700
	14	4,600
	15	4,600
	16	4,000
	17	4,200
	19	4,200
	20	2,400
	21	2,800
	22	5,100
	23	2,900
	24	4,100
	26	3,500
	30	3,100

*Estimated flow in Ohio River d
shut down, as shown by records. T

†Records do not show any flow
of the power plant on these dates, b
there was a flow past the dam of
shut-down periods. This is leakag

Louisville, Kentucky
February 9, 1984

Mr. Ronald J. Mikulak, Project Officer
Environmental Assessment Branch, EPA Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Mr. Milulak,

I want to congratulate you on the fine job you and your colleagues did on the Draft EIS for North Jefferson County, Kentucky, wastewater facilities. I read it with a great deal of interest, and I learned a lot about my neighborhood that I didn't previously know. I also have a greater appreciation of the problems involved when an area such as ours needs to have sewers installed.

I attended the February 7 meeting at Ballard High School, but can't say that I enjoyed that as much. I share the frustrations expressed concerning what to do next. In light of Mr. Shogren's prediction that we'll probably have to live with your "No Federal Action Alternative" until about 1990,
EP-1 I wish you could offer some temporary solutions. Aren't there interim repairs that can be made to existing small treatment plants that will cut down on the pollution that they produce? Also, what are your recommendations
EP-2 for individual septic tanks that are no longer working properly? Is it feasible for individual lots to install leaching or evapotranspiration beds? Can this be done with a small group of lots? My neighbors and I need to know what we can do to keep our neighborhood from stinking from now until 1990 -- and it has to be something within our economic means. Bonfire Drive is not in the affluent Indian Hills area!

Perhaps you already know that about eight houses on the west side of Bonfire Drive (those backing up to little Muddy Creek) are being put on the sewers being installed for Windsong subdivision. Unfortunately, those are not the houses in the area with problem septic tanks. It is understandable that they are incensed at being required to hitch onto sewers that they don't feel that they need, while effluent from septic tanks across the street and up-hill from them are pouring foul smelling drainage into their front yards.

Our personal situation is not acute, though we feel our days may be numbered in light of the fact that our septic system is 28 years old. There are only two of us living at 5804 Bonfire, and we have had the tank pumped regularly every two years, and so far, have had no symptoms of malfunction. However, we dislike the smell of the neighborhood on rainy days, and regret the obvious signs of pollution in the beautiful little tributary of Muddy Creek that flows through our back yard. We would appreciate any suggestions you can make.

Would you please put my name on your list to receive a copy of your final EIS, if I am not already on it by virtue of being on the list that received a copy of the Draft.

Yours sincerely,

Eugenia Palmer

Mrs. Harry H. Palmer
5804 Bonfire Drive
Louisville, Kentucky 40207

[illegible]
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ATLANTA

EP-1. It is technically feasible for small plants to meet the effluent limits set forth in their NPDES permits. The changes necessary to do this would have to be determined on an individual basis. The Louisville and Jefferson County Public Health Department enforces proper operations of small-area treatment plants.

EP-2. See p.188 and Figure 21 of the Draft EIS for determining causes of and corrective action for system failures. Evapotranspiration beds are probably not feasible for the Louisville area because the amount of rainfall exceeds the amount of evapotranspiration. If land is available, a community system is technically feasible; however, it may be difficult to implement.

HERITAGE

MEMORANDUM

TO: Valerie A. Wickstrom, Commissioner's Office
Department for Environmental Protection

FROM: Mary Cronan Oppel, Director MCO
Kentucky Heritage Council and
State Historic Preservation Officer

DATE: February 9, 1984

RE: Draft Environmental Impact Statement
North Jefferson County Wastewater Facilities

KHC-1 A report of the preliminary archaeological survey of the Interceptor Corridors should be submitted to the State Historic Preservation Officer for review, comment and approval. This office cannot evaluate the archaeological recommendations proposed in the Draft Environmental Impact Statement until we are afforded the opportunity to examine the survey report.

Furthermore, it is the responsibility of the U. S. Environmental Protection Agency to be in compliance with the Advisory Council on Historic Preservation's Rules and Regulations for the Protection of Historic and Cultural Properties (36 CFR, Part 800) pursuant to the National Historic Preservation Act of 1966, the National Environmental Policy Act of 1969 and Executive Order 11593.

As early as possible before the Environmental Protection Agency makes a final decision concerning this project and, in any event prior to taking any action that would foreclose alternatives or the Advisory Council's ability to comment, the Environmental Protection Agency should take the following steps to comply with the requirements of Section 106 of the National Historic Preservation Act.

KHC-1 1. Consult with the State Historic Preservation Officer by making available for review and comment the preliminary survey report referenced in the Draft Environmental Impact Statement.

KHC-2 2. In consultation with the State Historic Preservation Officer conduct any further assessments deemed necessary to locate and evaluate potentially eligible archaeological properties which may be affected by the proposed project.

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(continued)

THE KENTUCKY HERITAGE COUNCIL THE STATE HISTORIC PRESERVATION OFFICE FRANKFORT, KENTUCKY 40601 (502) 564-7005

KHC-3 3. In consultation with the State Historic Preservation Officer apply the National Register criteria to all properties which may possess historical or archaeological values within the area of undertakings potential environmental impact.

KHC-4 4. For all listed or eligible National Register properties, the Environmental Protection Agency should, in consultation with the State Historic Preservation, apply the criteria of Effect and Adverse Effect.

5. If it is determined that No Adverse Effect or Adverse Effect exists then the Environmental Protection Agency must consult the Advisory Council as specified in Section 800.4 C, through D of the Council's Regulations.

The Kentucky State Historic Preservation Office looks forward to cooperating with the Environmental Protection Agency on this project.

KHC-1. The report of the preliminary archaeological survey was first published in the draft Preferred Alternative Report and was also included in the Draft EIS.

KHC-2. Once interceptors are designed, further investigations will be required for certain segments, as listed in Section 5.4.3 of the ft EIS.

KHC-3. The Kentucky Heritage Commission, the Louisville Landmarks Commission, and the Jefferson County Office of Historic Preservation were consulted for locations of all cultural resources listed on the National Register of Historic Places and all recent nominations of eligible properties. These properties are listed in Section 4.12 of the draft EIS.

KHC-4. Consultation with the State Historic Preservation Officer will be required as a grant condition for the LS2a interceptor, as specified in Section 5.4.6 of the draft EIS. It is not possible to make decisions on specific effects at this point, because the exact routes of the interceptors are not known.

1763 Applewood Ln
Louisville, Ky 40222
Feb. 13, 1984

Ronald J. Mikulak,
Atlanta, Ga.

Dear Sir:

I attended the E.I.S. meeting on Feb 7, 1984 at Ballard High School Louisville, Ky.

HB-1 I feel we need sewers in the Wrendale Area. Since we have lived in the area over 20 years the growth of the community has been great. The [illegible] in this area is not good to the environment.

I am asking you to do what you can to speed this issue so we can get sewers in the near future.

(2)

At the meeting we were told to let you know of our comments. There were many at the meeting felt that this project had been put off entirely too long and the environment should have been taken in the sewer system.

I hope you will look into the matter and help us on this important issue in our community.

Sincerely,

Mrs. Howard L. [illegible]

HB-1. Applewood Lane is in subarea 62, which is recommended for sewering and connecting to the Morris Forman system. The Louisville and Jefferson County Metropolitan Sewer District is the local agency that would implement this action.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
Atlanta GA 30333

February 15, 1984

Mr. Ronald J. Mikulak
Project Officer
Environmental Assessment Branch
U.S. Environmental Protection Agency
Region IV
345 Courtland Street, N. E.
Atlanta, Georgia 30365

Dear Mr. Mikulak:

We have reviewed the Draft Environmental Impact Statement (EIS) for the Proposed Wastewater Management Facilities for North Jefferson County, Kentucky. We are responding on behalf of the U.S. Public Health Service and are offering the following comments for your consideration in preparing the Final EIS.

According to the EIS, the failing septic tanks and improperly operated treatment plants have created public health and water quality problems in North County. We understand that "the purpose of the EIS is to determine the most cost-effective approach to alleviating these problems." We are in support of those improvements necessary for wastewater treatment practices and to minimize potential adverse public health and water quality effects. However, satisfactory safeguards must be incorporated into the project to minimize potential adverse public health risks.

It is indicated that there are serious problems with septic field performance in North County and that the area may be suffering from serious water quality PHS-1 problems as a result. In the interim, what measures will be taken to improve the conditions of the failing on-site systems? What local legal requirements exist to assure adequate maintenance of on-site systems, such as periodic pumping of septic tanks?

In view of the seriousness of the local septic tank failure problems and because of poor soils, high water table, shallow depth to bedrock in certain areas, and the hydrologic connection between septic tanks and the underlying PHS-2 limestone aquifers which are fractured and jointed, the public health implications that may be associated with possible contamination of ground water resources from septic tank systems should be assessed. The potential effects of on-site systems upon local private and community wells should be evaluated to determine if the quality of local ground waters is suitable for the protection of public health. Private wells and community wells that could be affected by contaminants and/or pathogens from upgradient on-site systems should be sampled to determine if any interim health protective measures need to be implemented.

USPHS-3 Figure 5 of the EIS shows the proposed North County Regional Treatment Plant as being near Bandman Park and the State Railway Museum. The environmental impact of this plant upon these public lands and any residential properties in the vicinity of the plant should be discussed in the Final EIS. Noise (treatment plant and truck), odor, and any other environmental impacts that would be associated with this plant and/or transport of waste treatment materials and sludge should be considered in this discussion.

We appreciate the opportunity to review the Draft EIS. Please send us one copy of the Final EIS when it becomes available. Should you have any questions about our comments, please call Mr. Robert L. Kay, Jr., at (404) 452-4161.

Sincerely yours,

Joe R. Miller
Acting Chief, Environmental Affairs Group
Environmental Health Services Division
Center for Environmental Health

USPHS-1. Maintenance of septic tank systems is a local responsibility, under the purview of the Louisville and Jefferson County Health Department.

USPHS-2. In the environmental inventory, it was estimated that less than 0.4 percent of the residences in the study area draw their water from wells and cisterns. Drinking water and public health have traditionally been local responsibilities. No information has been found to indicate any public health problems with water supply in the North County study area, nor has the Health Department indicated that such problems exist.

USPHS-3. Impacts resulting from the North County regional plant were discussed in the draft Alternatives Evaluation Report. The overall impact was not determined to be significant, mainly because the treatment plant site is not near a residential area. There should be no noise or odor problems from a properly designed and operated treatment plant.

115 South Ewing Avenue • Louisville, Kentucky 40206 • Phone (502) 895 5218

THE League of Women Voters
OF LOUISVILLE AND JEFFERSON COUNTY

MEMO TO: Mr. Ronald J. Milculak, Project Officer
Environmental Assessment Branch
EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

FROM: The League of Women Voters of Louisville and Jefferson County

RE: Comments on the Draft Environmental Impact Statement for
North Jefferson County, Kentucky
December, 1983

DATE: February 16, 1984

LWV-1 This E.I.S. is not so much a study of environmental issues as it is a revision of Jefferson County's federal funding eligibility. LWV-2 The emphasis has been upon "cost effective", defined primarily as the most cost effective use of federal dollars. The second listed objective (p. 7), "environmentally sound", apparently means that minimal degree of environmental soundness required by federal and state laws and regulations which will entail the least expenditure of federal dollars.

LWV-3 Descriptions in this document of the 201 Alternative and EPA's Preferred Alternative show major differences in the quality of Jefferson County's 1974 EPA guided 201 plan and EPA's revised 1984 plan for Jefferson County. LWV-4 It should be noted that Jefferson County's 201 study, begun in 1973 in compliance with the Clean Water Act, generally re-affirmed the county's 1964 Master Plan. In 1975, the 201 plan was approved by local, state and federal officials.

Page thirteen of this document says in its summary evaluation for the 201 Alternative:

> "Construction funding will be split between EPA and local government, with EPA providing a greater share than for any other alternative. Public health risks will be virtually eliminated as septic tanks and small treatment plants are abandoned. . . This alternative has greater technical reliability than the others . . . This alternative is probably the most acceptable to the local public. . . It has the strong endorsement of local agencies and government."

LWV-5 Despite these generally positive words (with the notable exception [illegible] EPA's share of the funding split), EPA has spent the past seven years, nearly a decade, in wrecking the 201 Plan virtually beyond repair.

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LWV-1. An act of Congress revised federal funding eligibility; the EIS recognizes these changes in the Clean Water Act.

LWV-2. The most cost-effective alternative is defined as the system with the lowest present worth unless nonmonetary costs are overriding. The present worth calculations did not consider federal funding. EPA has not defined cost-effectiveness as "cost-effective use of federal dollars." The selected alternative entails the greatest expenditure of federal funds allowed by law.

LWV-3. EPA has not revised any plans. Planning is a local responsibility. EPA has determined the cost-effective solution to existing problems, as required by law. EPA does not know what is meant by "major differences in the quality..."

LWV-4. The history of wastewater management planning in the study area is given in Section 2.1 of the Draft EIS.

LWV-5. The North County EIS did not change the 201 plan, which can still be implemented by local agencies.

In 1977, 201 construction was halted and the Mill Creek 201 Revision was begun. This EIS was completed two years ago with mixed results for Mill Creek citizens. The good news was that citizens who perceived that they had no need for sewers were

LWV-6 told that they might keep their septic tanks. The bad news was that EPA condoned continuing and increasing pollution of the underground aquifer, described on page 122 of this North County document as "one of the major groundwater resources in the United States". Hundreds of families were told that they must abandon their wells for drinking water purposes and pay for Louisville Water Company service. Moreover, surface streams in the area would continue to suffer pollution from septic tank seepage and some package plant discharges. Lack of sewers would limit future business and industrial growth. Whereas the original 201 Study was completed in two years, the study of the Mill Creek portion required five years and about half a million federal dollars. These dollars were costs to EPA, and do not reflect additional costs of local and state agencies which provided time and most of the raw information used.

LWV-7 The North County 201 Revision was begun in 1979. After five years and some $490,000 EPA dollars, with no estimate of additional local and state costs, EPA has proposed the following "Preferred Alternative" described on page 18 in the summary evaluation for LS2:

LWV-8 "Construction funding will be split between EPA and local government; EPA's share will be intermediate between LS1 and 201." [Translation: EPA's share of

LWV-9 funding will be enormously reduced from the 201 Plan]. "Local enforcement activities for small plants will decrease to 10-40% of existing needs." [Translation: instead of 48 small area plants there will be about 19 small area plants, so the Health Department will only have to worry about approximately 40% malfunctions as currently occur. Also, only the people who live along Harrods Creek, Goose Creek and Little Goose Creek will get most of these stream-water problems. These facts could be used to defend the general truthfulness of the next sentence, which would not be true for every section of the county]. "Public health risks from package plants and septic tanks will be greatly reduced or eliminated. . . This alternative is intermediate in technical feasibility between no-federal-action and 201 . . . This alternative is probably intermediate in public acceptance between no-federal-action and 201."

LWV-10 By EPA's own account in this document, after five years of study and over half a million federal state and local dollars, we are being presented with:

- A less attractive plan with less federal funding.
- A generally meaningless plan with no important new information supporting 201 plan revision, other than the 1981 Clean Water Act Amendments which altered the Construction Grants Program.
- An outdated plan based on too short a planning period (from 1980-2000) to be of any practical use.

Surely, this is an especially frustrating example of how the E.I.S. process was never intended to be used. Undoubtedly the worst frustration for local citizens has been knowing that the Mill Creek and North County EIS's never should have required so

LWV-11 long. A more expeditious approach could have produced either one, both, in a two-year time period or less. It is true that seven years of delay in local sewer funding has spared the U.S. Taxpayer a great burden in paying to help solve Jefferson County's health and environmental problems. However, for seven long years during this E.I.S. process, local government and citizens also have been prevented from taking any

LWV-6. Through the Mill Creek EIS, it was determined that groundwater in southwestern Jefferson County was influenced by septic tank use, but that it is still usuable as a treated drinking water source. EPA has neither the authority nor the intention of "writing off" the aquifer.

LWV-7. This is not a 201 revision; it is an environmental impact statement for the North County area of the 201 Plan.

LWV-8. The summaries quoted here date from the draft Alternatives Evaluation Report published in 1981 and simply state the facts applicable at that time. Since then the Clean Water Act has been changed so that the use of federal funds for conveyance or treatment capacity beyond that necessary to serve existing needs at the time of grant award, or 1990, whichever comes first, is prohibited. The level of federal funding for the LS2a, LS2c, or 201 alternative would be the same under the new law.

LWV-9. Of the 48 existing small-area plants, 6 would remain under the LS2a alternative; one of these discharges to Goose Creek, Little Goose Creek, or Harrods Creek. Whether or not there will be future small-area plants is a local decision, and enforcement would be up to the local Health Department.

LWV-10. This is not "EPA's own account." Moreover,

- o No previous plans have contained any commitments of federal funds for the North County area; it cannot, be said, therefore, that the funding for LS2a is less than anything.
- o EPA has not revised the 201 plan. The 1981 Clean Water Act amendments are important new facts concerning federal funding.
- o The length of the planning period is defined in federal regulations. Planning beyond 20 years requires speculation that could lead to imprudent spending of present funds.

LWV-11. This EIS has had no effect on what the U.S. Taxpayer has paid toward construction grant funding during this EIS process. The amount of funds provided for Kentucky has also not been affected by the EIS. These funds are spent according to the State's priority list. Even if the EIS had been completed earlier, the project's position on the priority list is such that construction grant funding is not expected until after 1987. Furthermore, this EIS has not prevented local agencies from taking actions with local funds.

LWV-11 substantial actions to solve our own problems. Community agencies, faced with constant decisions regarding future community growth and development, have been forced to make such decisions without any viable long-term plan to follow. No doubt they will be found, in retrospect, to have made many unwise and costly decisions.

LWV-12 It has been particularly devastating to local hopes for solving water quality and
health problems that the costs for wastewater facilities have soared so greatly
during this un-productive hiatus. The Engineering News Record Construction Cost
Index shows that such costs have risen since 1977 by a factor of 1.59, or cost at
least 50% more. Since 1979, the Cost Index increase has been 1.30. Fully aware
LWV-13 of the increasing dollar costs of inflation impacts upon Jefferson County citizens,
EPA virtually ignored this factor while conducting its leisurely studies. In so
doing, EPA chose to achieve federal dollar cost-effectiveness at the expense of
total dollar cost-effectiveness as the final goal of its actions in Jefferson County.

LWV-14 The resulting draft North County EIS must be disappointing even to EPA. After seven years and approximately one million federal dollars spent in destroying a 201 plan, nothing very useful has been found to replace it. Incredibly, Jefferson County is now faced with the necessity of doing its own study in order to find a practical replacement for its 1964 Master Plan.

LWV-15 Surely NEPA and the Clean Water Act were never intended to sabotage the efforts of a community trying to follow a practical, technically feasible, affordable long-range plan to solve its environmental and health problems. These laws were never intended, either, to prevent a community from trying to provide for its future growth in a way that would avoid repeating its past mistakes: pollution from septic tanks and mal-functioning sewage treatment plants on small streams.

LWV-16 However, that's what has resulted from EIS's conducted by EPA in Jefferson County.
While these EIS's have saved federal dollars, as intended by Congress in revisions
to the Clean Water Act, far more has been lost than has been saved. Although many
LWV-17 federal, state and local dollars have been spent by EPA, while costly time elapsed:

LWV-18
- This plan is not the long-range plan needed for environmentally sound growth in our community.

LWV-19
- This plan is not as technically feasible as the plan which we once had.

LWV-20
- This plan is not as affordable as the plan that we once had.

LWV-21
- This plan does not protect public health or the environment as much as the plan that we once had.

After 7 interminable years and such enormous costs, it is discouraging to realize that in our county the Environmental Protection Agency has been the single greatest force working against positive solutions to our wastewater-related environmental and health problems. Truly, we have discovered that we can not afford this kind of environmental protection.

Frances Wagner
Frances Wagner, President

Patricia Nightingale
Patricia Nightingale
Natural Resources Chair

KWV-12. EPA does not dispute the fact that construction costs have risen over the course of the EIS. Building now just to avoid inflated costs in the future is seldom, if ever, good public policy.

LWV-13. Inflation affects federal dollars the same as total dollars. EPA did not choose "federal dollar cost-effectiveness." The present worth analysis was done using total dollars; federal funding was not a factor.

LWV-14. EPA is not disappointed with the results of the draft North County EIS. The EIS did not take 7 years or 1 million federal dollars, and it did not destroy or change the 201 plan. The North County EIS addresses the existing water quality problems of the community. The selected alternative proposes a practical and useful wastewater management approach within the framework of current legislation. Long-range community planning is not an objective of the EIS process, but it is a responsibility of local authorities.

LWV-15. EPA concurs.

LWV-16. EPA does not agree that local efforts have been sabotaged, that community planning has been prevented, or that far more has been lost than saved.

LWV-17. EPA has not spent state or local dollars.

LWV-18. Long-range planning for environmentally-sound growth is a local responsibility.

LWV-19. The decreased feasibility of the LS2a alternative relates to the number of future small-area treatment plants assumed to occur if the 201 system is not built. Whether the small plants or the 201 system is built is a local decision.

LWV-20. The LS2a alternative is more affordable than the 201 alternative, as shown in Table 52 of the draft EIS.

LWV-21. The LS2a alternative eliminates existing public health and environmental problems. Planning for future environmental protection is a local responsibility.

DEPARTMENT OF THE ARMY
LOUISVILLE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 59
LOUISVILLE, KENTUCKY 40201

February 17, 1984

ORLPD-R

Mr. Ronald L. Mikulak, Project Officer
Environmental Assessment Branch
Environmental Protection Agency
Region 4
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Mr. Mikulak:

We have reviewed the Draft Environmental Impact Statement (DEIS) on proposed wastewater facilities for northern Jefferson County, Kentucky.

COE-1 The proposed action will not affect any projects of the Louisville District Corps of Engineers. However, the potential scope of work warrants specific comments relative to Section 10 and Section 404. Failure to address certain environmental aspects could result in the necessity to prepare a supplement to the DEIS as part of the permit review procedure.

This project involves work in a wetland and installation of utility lines in navigable waterways. Further, based on the preliminary interceptor alignments shown in the DEIS, it is possible that modification to the channel alignment could be a preferred alternative to facilitate construction.

COE-2 The EIS should specifically address the following:

a. The 404b(1) guidelines associated with all fill work particularly the wetland fill.

b. The disposal or storage area for the material dredged from the waterway.

c. The boating safety measures to be employed on Harrods Creek and Goose Creek relative to vessels transiting the construction area.

d. The alternative of using a modified channel alignment for reaches where numerous crossings would be necessary; or where installation in the stream channel is contemplated.

e. The extent in acres of the wetland which would be impacted.

f. The alternatives considered for avoiding the wetland and the reason why it could not be avoided.

COE-3 An application for a permit should be submitted for all fill work performed in the wetland and for the streams in the following interceptor

COE-3 reaches: HC-6, HC-7, HC-8, MF-1, MF-3, GS-1, GS-2, GS-3, LG-1, LG-2, LG-3, LG-4, LG-5, LG-6, WS-1, WG-1, GP-2, PH-1, TL-1 and HC-2.

Any questions on permit matters concerning this project should be directed to the above address, Regulatory Functions Branch, ATTN: Mr. D. L. Hawkins, ORLOP-FP, or by calling (502)582-5452.

Thank you for the opportunity to comment.

Sincerely,

Dwayne G. Lee
Colonel, Corps of Engineers
District Engineer

COE-1. Comment noted.

COE-2. Specific construction activities will be addressed during design, when interceptor alignments are more precisely determined.

COE-3. EPA concurs; see Sections 1.6 and 3.2 of the Final EIS. Note that this comment lists an interceptor segment--GP-2--that does not exist. It was assumed that this was meant to be GT-2.

DEPARTMENT OF PUBLIC HEALTH
LOUISVILLE AND JEFFERSON COUNTY
400 EAST GRAY STREET

P O BOX 1704
LOUISVILLE KY 40201

T E WALLACE, JR., M D
DIRECTOR OF HEALTH

February 17, 1984

Mr. Ronald J. Mikulak, Project Officer
Environmental Assessment Branch
Environmental Protection Agency
Region IV
345 Cortland Street, N.E.
Atlanta, GA 30365

Re: Draft EIS for North Jefferson County, Kentucky

Dear Mr. Mikulak:

LJCPH-1 Ten years ago, in 1974, this community submitted to your agency, and received approval, of a Water Quality Management Plan (201 Plan) for the development of a liquid waste disposal system for this community. As of this date, no material benefit is evident within this community. LJCPH-2 In fact, it is quite apparent that the community leadership and official agencies concerned with the problem must now start the process of informing the public, gaining their support and developing plans with major adjustments in the original plan concepts. In fact, gaining community support is going to be considerably more difficult as a result of Environmental Impact Statements for the Millcreek Watershed and North Jefferson County.

For seven of these ten years, material progress in improving wastewater disposal capability for this community has laid dormant while these two statements have slowly moved to completion. Each study has taken approximately five years to complete. During these seven years of study, the average annual inflation rate for construction probably stands minimally at 10%.

As early as December, 1980, a letter from the Chairman of this Board, Mason C. Rudd, to you, expressed concern for some directions the consulting group was taking in developing the North County Environmental Impact Statement. Your response of January 16, 1981, called attention to an opportunity for local government and local agencies, citizens, environmental groups and community leadership, to have the opportunity to review and comment on all material developed for the Environmental Impact Statement. Comments have been made repeatedly. The final

LJCPH-1. The Pond Creek sewers, which are part of the 201 plan, have been built.

LJCPH-2. The process of informing the public was an integral part of this EIS. In fact, public opinion to date has been in favor of a public sewer system in the North County study area. The LS2a alternative is responsive to the opinion that existing development should be connected to a regional sewer system. The 201 alternative can be implemented without any major adjustments if local agencies choose to do so.

product, however, has failed to address many of the expressed
LJCPH-3 local concerns. The original 201 Plan for this area addressed
all areas with failing septic tank systems contributing to non
point source pollution. The final North County Environmental
Impact Statement preferred plan, does not. The final plan again
LJCPH-4 limits consideration of the growth and urban development of this
community. The original 201 Plan provided for such growth.

LJCPH-5 As with the South West EIS, it appears that the original
objective of PL 92-500 has been abandoned. The objective of both
LJCPH-6 Jefferson County studies has been justification of reduced
Federal funding for construction of a collecting and treatment
system to meet the needs of this area. This justification not
LJCPH-7 only consumed seven years in a high inflation period, but also
developed recommendations which this community's leadership
believes detrimental to the future growth and development of this
area. It also creates impediments to the efforts to gain public
support for future plans.

Sincerely,

T.S. Wallace, Jr., M.D.
Director of Health

TSW:jlg

cc: Mayor Harvey I. Sloane, M.D.
County Judge/Executive Mitch McConnell
Board of Health Members
Mr. Gerald Neal

LJCPH-3. The EIS selected alternative does address all areas with failing septic tank systems.

LJCPH-4. The EIS does not limit local agencies from implementing any plan they consider necessary for future growth.

LJCPH-5. PL92-500 has been amended by Congress several times. The LS2a alternative virtually eliminates water pollution from existing sources, which is consistent with the objective of the current revision of the Clean Water Act.

LJCPH-6. The North County EIS is not a justification for reduced federal funding for construction of a collection and treatment system to meet the needs of the area. The federal funding amount is the same for both the LS2a and 201 alternatives.

LJCPH-7. This EIS does not make recommendations for future growth and development. Planning for future growth is a local responsibility.

Charlotte E. Baldwin
Secretary

Martha Layne Collins
Governor

Commonwealth of Kentucky
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
Office of the Secretary
Frankfort, Kentucky 40601
Telephone (502) 564 3350

February 17, 1984

Ronald J. Mikulak, Project Officer
Environmental Assessment Branch
EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Mr. Mikulak:

The Kentucky Natural Resources and Environmental Protection Cabinet (NREPC) serves as the state clearinghouse for review of environmental documents for Kentucky State Government. Enclosed are the comments that the Cabinet has received on the Draft Environmental Impact Statement - North Jefferson County, Kentucky Wastewater Facilities from various State agencies.

The Cabinet appreciates the opportunity to comment on this Draft EIS. If you have any questions, please contact me at (502) 564-3350.

Sincerely,

Valerie A. Wickstrom

Valerie A. Wickstrom
Environmental Review Coordinator

VAW/mdk

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION

ENVIRONMENTAL REVIEW

Division of Waste Management

Comments on Draft EIS
North Jefferson County, Kentucky
Wastewater Facilities

The report states that the digested and dewatered sludge from the preferred regional sewer system alternative plan for North Jefferson County Wastewater facilities will be trucked to the Morris Forman Treatment Plant for disposal. The plans should clearly identify whether this sludge would be recycled into the Morris Forman Wastewater Treatment Plant or be stored there for ultimate disposal by Morris Forman plant authority. NREP-1

The Division of Waste Management regulates the disposal of sludge for wastewater treatment facilities. A permit would be required from this Division for the disposal of sludge at a solid waste disposal facility.

NREP-1. For the purpose of evaluating alternatives, the EIS assumed dry sludge would be trucked to the Morris Forman treatment plant for disposal. The actual disposal method used at the North County plant will depend on cost-effectiveness studies done during design of the plant and on the results of MSD's regional sludge disposal study. All applicable state permits must be obtained by MSD.

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION

ENVIRONMENTAL REVIEW

Division of Water   Project Number: 84-2

Project Title: DEIS, North Jefferson County Wastewater Treatment Facilities

The Division of Water has reviewed this DEIS. The Division's comments respond to specific points and discuss the preferred alternative.

SPECIFIC POINTS

NREP-2 | Page 3.   Figure 1   Jefferson County

The Shively wastewater treatment plant, indicated on the map, has been abandoned for several years.

NREP-3 | Page 19.   1.3 Recent Changes in the Construction Grant Program   Paragraph 2
"1986" should be "1987".

NREP-4 | Pages 65 to 69   Table 14. Discharge Limitations for Small-Area Treatment Plants

The Division of Water notes that the data presented in this table were supplied by the Division to Gannett, Fleming, Corddry, and Carpenter.

NREP-5 | Page 73   3.1.5 Regional Treatment Plant   Paragraph 3

The DEIS states that the Ohio River Valley Sanitation Commission Ohio River model indicates that secondary treatment (85% removal of biochemical oxygen demand and suspended solids) would be sufficient for the Morris Forman wastewater treatment plant. Because of that plant's size, the Division of Water believes ORSANCO has stated that additional treatment (to obtain 92% removal of BOD and SS) is necessary.

NREP-6 | Page 177   5.1.1 Recent changes in the Construction Grants Program   Paragraph 2
"1986" should be "1987".

PREFERRED ALTERNATIVE

Page 98 to 101   3.2.3 LS2 Alternative

NREP-7 | Page 177 to 240   5. The Preferred Alternative

The Division of Water agrees with the selection of alternative LS2a as preferred. LS2a appears to be a reasonable choice. The Division of Water's regulatory program will be enhanced as a result of the reduction, anticipated in LS2a, of the number of small area wastewater treatment plants.

Clyde P. Baldwin, P.E.   Manager, Permit Review Branch
Division of Water   Date   1 Feb 84

NREP-2.   Comment incorporated in revised Figure 1; see Section 1.1.

NREP-3.   Comment incorporated in the Final EIS; see Section 1.3.

NREP-4.   The data were attributed to KNREPC on page 62 in Section 3.1.3 of the Draft EIS.

NREP-5.   Morris Forman is currently operating under a simple requirement for secondary treatment. ORSANCO is considering revisions to its regulations that could result in a requirement for 92 percent removal during summer months.

NREP-6.   Comment incorporated into the list of revisions for the DEIS; see chapter 4.

NREP-7.   Comment noted.

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
KENTUCKY NATURE PRESERVES COMMISSION
407 BROADWAY
FRANKFORT, KENTUCKY 40601
(502) 564 2886

February 2, 1984

Ms. Valerie A. Wickstrom
Commissioner's Office
Department for Environmental Protection
Fort Boone Plaza, 18 Reilly Road
Frankfort, Kentucky 40601

Dear Ms. Wickstrom:

This is in response to your request for environmental review of the Draft E.I.S. for North Jefferson County, Kentucky, wastewater facilities. The basic information that is provided in the document appears to be KNPC-1 complete and accurate. The site specific analyses of impacts contained in this draft E.I.S. were adequate though the mitigative measures proposed are vague and would likely be difficult to enforce during construction.

KNPC-2 We are, however, disturbed that alternative interceptor corridors were not discussed. The stream bottoms of Jefferson County are some of the few undeveloped areas in Jefferson County, and as such they support important environmental resources. In particular Goose Creek, Little Goose Creek, and to a lesser degree, Harrod's Creek, contain relatively undisturbed habitats possibly worthy of protection. Certainly, the cessation of pollution into these streams is an important and desired benefit; however, this does not have to be at the expense of the natural communities along their watercourses. Routes along existing corridors and right-of-ways are proposed in several areas in the plan and serious consideration should be given to using this approach instead of stream bottom corridors.

If we can be of further assistance, please let us know.

Sincerely,

Richard R. Hannan

Richard R. Hannan
Director

RRH/bda/jbs

KNPC-1. EPA has no authority to enforce mitigative measures except where federally protected natural areas exist or where specific grant conditions have been included. Detailed archaeological and vegetation surveys are routinely conducted during design of a project. The opportunity exists to further consult with the Kentucky Nature Preserves Commission and others to establish more specific mitigative measures.

KNPC-2. Stream corridors are the least costly locations for sewers. An environmental survey of conveyance corridors was conducted to determine areas particularly sensitive to construction, and interceptor corridors were given a value rating based upon the significance of the natural resources in the corridor. Recommendations for mitigation of impacts were made relative to the significance of the resource; see Section 5.4.4 of the Draft EIS. During design the use of existing rights-of-way will be investigated, and these surveys will be coordinated with the Kentucky Nature Preserves Commission and other agencies as appropriate; however, the use of existing rights-of-way is not always possible.

Response to Natural Resources & Environmental Protection Cabinet Environmental Review #84-2; Draft EIS--North Jefferson County, Kentucky Wastewater Facilities, December 1983.

OSA-1 We at the Office of State Archaeology concur with the Draft EIS of the North
Jefferson County, Kentucky, Wastewater Facilities. In particular, we agree
that intensive archaeological surveys by competent archaeologists should be
conducted on the interceptor corridors as well as other proposed construction
areas (i.e. treatment plants). Furthermore, we approve of the proposed pre-
construction surveys of floodplain areas which include deep testing techniques
to locate buried archaeological deposits. It has been noted, however, that
OSA-2 the proposed archaeological investigations as stated in the EIS (p. 169) would
be directed at prehistoric site resources. It is our opinion that historic
archaeological resources are equally important and should not be overlooked or
slighted as potentially significant sites.

OSA-3 Finally, the EIS refers to a preliminary survey by Grumet and Histovich (1980). This office does not have a copy of this report. If possible, we would like the opportunity to examine this document.

Dr. R. B. Clay
Office of State Archaeology
U. of K.
Lexington, Kentucky 40506

OSA-1. Comment noted.

OSA-2. EPA concurs that historic archaeological resources are equally important; the citation to p.169 is not clear, however.

OSA-3. A copy of the referenced report has been sent to Dr. Clay.

Stephen Reeder
COMMISSIONER

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KENTUCKY 40622

Floyd G. Poore
SECRETARY

February 8, 1984

Ms. Valerie A. Wickstrom
Office of the Secretary
Natural Resources & Environmental Protection Cabinet
Fifth Floor, Capital Plaza Tower
Frankfort, Kentucky 40601

Dear Ms. Wickstrom:

Subject: Draft EIS, December, 1983 - Wastewater Facilities
North Jefferson County, Kentucky

The Kentucky Department of Highways has completed its review of the subject proposal.

KDH-1 Because of the potential for future conflicts and the need to coordinate individual sewer projects developed by the subject plan, we urge that proper consideration be given to transportation facilities which may be affected by such projects.

The Department of Highways is responsible for controlling both public and private usage of the State road system rights-of-way. Any firm, individual, or governmental agency desiring access to a State road or desiring to perform any type of work on State right-of-way must have in his possession at all times a copy of the permit, authorization letter, and detailed drawings of work to be done. This issuing of a permit is neither an automatic action nor a foregone conclusion. Each case is considered on its own merits, considering the reasonable rights and responsibilities of both the traveling public and the applicant desiring to encroach upon the State right-of-way.

We encourage the use of private property for placement of utility facilities where possible and practical; but we realize that in some instances highway rights-of-way are the only reasonable places to locate the proposed utilities. In these cases, we expect the conscientious efforts of both the applicant and the contractor to minimize adverse effects on the roadway and on the traveling public due to construction of the applicant's project.

Since State maintained roads may be affected by future sewer projects associated with this plan, any proposed access or encroachment should be coordinated at the earliest possible stage with our District Highway Office. This early coordination can, in many instances, prevent project conflicts and delays.

Ms. Valerie A. Wickstrom
Page 2

Encroachment regulations are found in the Department's Permits Manual. For construction situations affecting the flow of traffic, requirements for maintaining traffic control may be found in the Manual for Uniform Traffic Control Devices, a nationwide regulatory manual. Both manuals may be seen at Highway District Offices or purchased for $10.00 and $18.00, respectively, from the Division of Management Services, State Office Building, Frankfort, Kentucky 40622, phone number (502) 564-6927. If there are any questions about any of our comments, please phone me at (502) 564-2932.

Sincerely yours,

Thomas A. Scott

Thomas A. Scott, P.E.
Division of Design

TAS:lk:xx

cc: H. R. Monhollon

KDH-1. Coordination with the Department of Highways will occur during design.

Louisville and Jefferson County
Metropolitan Sewer District
400 South Sixth Street
Louisville, Kentucky 40202
502 587 0591

MSD

February 29, 1984

Mr. Ronald J. Mikulak
Project Officer
Environmental Assessment Branch
EPA Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: North Jefferson County, Kentucky Draft EIS

Dear Mr. Mikulak:

We have reviewed the Draft Environmental Impact Statement for North Jefferson County, Kentucky.

In general, the Preferred Alternative - LS 2a - proposes a limited version of the 201 Plan and, as such, appears to be a satisfactory MSD-1 alternative. However, the financial feasibility, in light of your assumed 55% level of federal grant funding, is questionable. It appears that federal funds for North County will not be available for North County until 1987, based on the current State Priority List. By that time, there may very well be no federal funding available for sewering the North County area.

Enclosed are our comments regarding the technical contents of the report.

Sincerely,

C. A. Neumayer
Acting Executive Director

CAN/jkc

Enclosure

cc: MSD Board

ENVIRONMENTAL ASSESSMENT BRANCH
RECEIVED
MAR 2 1984
EPA-REGION IV
ATLANTA, GA.

"An equal opportunity employer M/F/H/V"

MSD-1. The 55% level of federal funding was used because it is the current level established by federal law. EPA cannot predict what future federal funding levels or appropriations will be. MSD may make other assumptions if it decides to re-examine the financial feasibility of any sewering plan.

Draft Environmental Impact Statement
North Jefferson County, Kentucky

	Page No.	Comment
MSD-2	2	Plant No. 85 - Netherton Place is undeveloped, but page 32, 5th paragraph, says it was built in 1982. Page 100, which is the recommendations' list for small WTP's for the preferred alternative (LS-2a) does not show Netherton Place. None of the alternatives shows a recommendation for Netherton Place and none of the figures shows an interceptor to relieve it. What's going to happen with this WTP?
MSD-3	3 - 4	Figure 1 - Delete Existing Municipal WWTP 4, Shively. This plant was abandoned and the system connected to MFWTP in 1976
MSD-4	7	1st full paragraph, line 3 - Change "four" to "six"
MSD-5	7	2nd full paragraph, line 4 - Morris Forman WTP is NOT "...located south of Louisville." Change to "southwest of and adjacent to"
MSD-6	17	Table 5, ENVIRONMENTAL IMPACTS - For clarification, revise last line to read: "64 km (40 mi.) of interceptor routes for LS2a, and 71 km (44 mi.) for LS2c."
MSD-7	29	1st paragraph, line 5 - Change "more than 50" to "88"
MSD-8	30	No. 1, line 2 - Change "benefitted" to "benefited"
MSD-7	30	No. 4, line 5 - Change "of" to "on"
MSD-7	31	No. 8 - Question validity of statement. Believe you have reference to KRS 107.020(5)(e) which reads: "...(e) payment of attorney's fees, underwriting and fiscal agency fees, trustee's fees, rating service fees if approved by the fiscal court,..."
MSD-4	32	Section 2.2 Wastewater Treatment Plants, paragraph 3, line 5 -Change "four" to "six"
MSD-7	32	Paragraph 5, line 1 - Add "1983" following "October 1,"
MSD-7	38	Paragraph 2 - First two sentences are wrong. NPDES Permits specify: "Monthly Averages for BOD$_5$ and SS and Weekly Averages which are 50% higher than Monthly Averages." They do not specify: "Daily Averages and Daily Maximums twice the Daily Averages."
MSD-7	39 - 41	Table 8 - Change heading: "Daily Average (mg/L)" to "Monthly Average (mg/L)"
MSD-7	59	1st paragraph, last sentence - For clarification, add "with a vacuum system" following "comparison"

MSD-2. The Netherton Place treatment plant was built in 1982, but it does not yet operate because its service area has not been developed. Netherton Place was not listed in Chapter 3, because at the time the Alternatives Evaluation Report was written it had not been built. In Chapter 5--The Preferred Alternative--it was assumed that Netherton Place would be developed by 1990 and connected to the regional system, as indicated in Table 41, page 179. If Netherton Place is not developed at the time of grant award or 1990, whichever comes first, then capacity for Netherton Place would not be federally funded.

MSD-3. Comment incorporated in revised Figure 1; see Section 1.1.

MSD-4. The correct number is five; see Chapter 4 for correction. (Hite Creek is not considered a small-area plant.)

MSD-5. Comment has been incorporated into the FEIS; see Section 1.1.

MSD-6. Comment has been incorporated into the FEIS; see Section 1.2.4.

MSD-7. Comment noted.

MSD-8. Benefitted is acceptable (Webster's Collegiate Dictionary).

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	Page No.	Comment
MSD-9	62	At end of line 4 - For clarification, add "sanitary" following "Any reduction in"
MSD-10	76	Sentence following No. 4 - Change "Figure 11" to "Figure 10"
MSD-9	81	2nd full paragraph, line 4 - Change "analysis" to "analyses"
MSD-11	94	Table 21 - Rotate Table 180°; change heading on fourth alternative from "LS 2c" to LS1c"; put * in front of "*Hite Creek" and "*Floyds Fork" and add footnote: "*Same for all six alternatives"; add a "TOTALS" line for all 12 columns
MSD-10	98	Section 3.2.3, 1st paragraph, 2nd sentence - What about subareas 4 and 35 which also will not be connected to NCWTP or MFWTP?
MSD-12	99	Subarea (34) - Running Creek is listed as a 28,000 gpd WTP. Table 14 on page 68 lists it as a 110,000 gpd WTP.
MSD-9	101	Section 3.3, line 4 - Change "or" to "and"
MSD-10	102	Last line - Change "$10/person" to "$10/person/year"
MSD-13	108	Table 26, Hydrology, On-Site Systems - Change "...will decrease as systems are eliminated." to "...will decrease as failed systems are rehabilitated or eliminated."
MSD-14	110	Table 27, Family Income/User Charge - Under Regional Sewerage, change "from" to "for", and under Small Area Treatment Plants, change "from" to "for" (twice)
MSD-11	115	Last paragraph is wrong. MSD is the only public owner not subject to the PSC. See KRS 278.010(3)(f)
MSD-14	130	Existing Water Quality Conditions, 1st paragraph - Change "Middle Branch of Beargrass..." to "Middle Fork..."
MSD-14	131	2nd paragraph, line 1 - Change "plant" to "plants"
MSD-9	138	1st paragraph, last line - Change "-preserve" to "-preserves"
MSD-15	165	3rd paragraph - Your assumptions are invalid because you include federal share of capital cost for "...on-site rehabilitation, and collectors..."

MSD-9. EPA does not agree.

MSD-10. See Chapter 4 for correction.

MSD-11. Comment noted.

MSD-12. The actual flow is 28,000 gpd; the permitted flow is 110,000 gpd.

MSD-13. EPA disagrees. Flows will decrease when systems are eliminated; rehabilitation will not necessarily decrease flows.

MSD-14. EPA concurs.

MSD-15. The average annual household costs in Chapter 4 were calculated in 1981 for the draft Alternatives Evaluation Report and were based on regulations in effect at that time. These costs were recalculated in 1983 to reflect the changes in federal funding laws; the revised costs were presented in Section 5.3 of the DEIS.

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Page No. — **Comment**

MSD-16 | 186

3rd paragraph - Hite Creek WTP has a design flow of 4.4 mgd, not 4.9

MSD-17 | 191

There are a few differences regarding sewer lengths between Table 43 and Figure 20. They are as follows:

Design Segment	Table 43-Length (meters)	Table 43-Length (feet)	Figure 20-Length (scaled) (feet)
DS-1	530	1,738	1,100
IN-1	420	1,378	2,650
LG-1*	9,280	30,438	32,800
RT-1	760	2,493	2,000
PL-1	1,410	4,625	3,800

* Includes entire Little Goose Creek Interceptor

MSD-18 | 203

Assessments, 1st paragraph, line 7 - Statement is wrong - MSD does not assess based on square feet of lot. We assess based on "Assessable Units." An "Assessable Unit" is defined as "A single-family residential lot, or equivalent, on which no more than one single-family residence can reasonably be constructed. Properties other than single-family residential lots shall be equated to assessable units, as determined by MSD. Apartment units are deemed equal to one-half an Assessable Unit." The size of the lot is not a factor.

MSD-19 | 204

Table 50 - Under LS2c and 201 add "0%$^{(a)}$" and "55%$^{(a)}$" the same as you did for LS2a

MSD-19 | 207

Table 52 - (Same as for Table 50)

MSD-20 | 222-224

For consistency, add "after route has been staked" in NC-6, NC-8, GS-1, LG-1 and HC-1

MSD-18 | 223

GS-4/GS-5/GS-6 - Change "habitational areas" to habitational sites"

MSD-18 | 224

LG-3/LG-4/LG-5/LG-6 - Change "habitational areas" to "habitational sites"

MSD-18 | 237

Section 5.4.6, 1st line - Change "mitigated" to "mitigative"

MSD-18 | 242

Table 60, 2nd column, 3rd member - Change "Wendy Hills" to "Windy Hills"

ECE1/U

MSD-16. The number 4.9 is correct in the context of this section, because it was the flow used by KNREPC to calculate effluent limitations.

MSD-17. The lengths of sewers given in Table 43 were not obtained by measuring the lengths on Figure 20. Figure 20 is merely a visual representation of what is described in the text. The lengths in Table 43 were measured from MSD maps with a much larger scale than 1 inch equals 4,000 feet and were used for costing purposes only. The actual length of interceptors will be determined during design.

MSD-18. See Chapter 4 for corrections.

MSD-19. Comment noted.

MSD-20. EPA disagrees; pedestrian surface survey and shovel testing may be done before or after route is staked. Deep testing need only be done after route is staked so as to minimize use of heavy equipment and presence of deep pits. The surface survey may indicate the need for further deep testing.

United States Department of the Interior

OFFICE OF ENVIRONMENTAL PROJECT REVIEW

Southeast Region / Suite 1384
Richard B. Russell Federal Building
75 Spring Street, S.W. / Atlanta, Ga. 30303

FEB 24 1984

ER-84/68

Mr. Ronald J. Mikulak, Project Officer
Environmental Assessment Branch
Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30365

Dear Mr. Mikulak:

We have reviewed the Draft Environmental Impact Statement for Wastewater Facilities, North Jefferson County, Kentucky, and have the following comments.

Mineral Resources

DOI-1 Since 1975, mineral deposits in Jefferson County have yielded limestone, sand and gravel, and clay. Cement is produced from one plant in the county. The preferred alternative would include a wastewater interceptor system, the exact routing of which should take into account known mineral deposits and processing plants. Thus, it is suggested that a survey and an evaluation of mineral resources be made in the area. We believe that with proper planning the project would produce no major conflict with mineral resources or development.

DOI-2 Also, we suggest that the statement should address the need for proper care in abandoning septic tanks and drainfields or other onsite treatment facilities.

Fish and Wildlife Resources

DOI-3 There are two areas that concern fish and wildlife resources within the study area: (1) the Caperton swamp forest on Muddy Fork in the vicinity of Indian Hills Trail, and (2) the bottomland hardwood forest areas on the floodplain terraces of the Ohio River (especially the mature bottomland forest located near the town of Prospect). The wetland and bottomland hardwood forest habitats occurring in these areas fall into Resource Category 2 of the U.S. Fish and Wildlife Service Mitigation Policy; the mitigation goal for this category is no net loss of in-kind habitat value. In keeping with the mitigation policy, it is recommended that either these habitat areas be avoided completely or that all losses to these habitats be compensated by replacement of the same kind of habitat value so that the total loss of such in-kind habitat value will be eliminated. Specific ways to achieve compensation for such habitat losses include (1) physical modification of replacement habitat to convert it to the same type lost; (2) restoration or rehabilitation of previously altered habitat; (3) increased management of similar replacement habitat so that the in-kind value of the lost habitat is replaced; or (4) a combination of these measures.

Thank you for the opportunity to comment on this statement.

Sincerely yours,

James H. Lee

James H. Lee
Regional Environmental Officer

DOI-1. From the preliminary survey of interceptor corridors, disruption of any processing plants or actively worked mineral deposits is not expected. Construction of interceptors should not significantly conflict with future working of deposits because of the limited amount of land consumed by the interceptor route.

DOI-2. It may be prudent for homeowners to fill in abandoned septic tanks when they connect to the public sewer. Guidance in such activities would be provided by MSD and/or the Health Department.

DOI-3. Consultation with the U.S. Fish and Wildlife Service will be required as a grant condition for interceptors constructed in the Caperton swamp forest and the bottomland hardwood forest areas on the floodplain terraces of the Ohio River. See Section 3.2 for the revised requirements.

6. LIST OF PREPARERS

U.S. ENVIRONMENTAL PROTECTION AGENCY

Robert B. Howard	Chief, NEPA Compliance Section
Ronald J. Mikulak	Project Officer
Daniel B. Ahern	Chief, North Area Grants Management Section

GANNETT FLEMING CORDDRY AND CARPENTER, INC.

Thomas M. Rachford, P.E., Ph.D.	Senior Project Manager
David L. Sheridan, P.E., Ph.D.	Project Manager
Stephen G. DeSesa	Environmental Engineer
Jeff Elseroad	Environmental Engineer
John W. Jacobs	Environmental Scientist
Larry C. Wills	Environmental Planner
Ronald R. Wright	Environmental Engineer
John J. Boland, P.E., Ph.D.	Consultant--Professor of Geography and Environmental Engineering at the Johns Hopkins University

CLAUDE TERRY & ASSOCIATES, INC.

Claude E. Terry, Ph.D.	Project Executive
Louise B. Franklin	Project Manager
R. Gregory Bourne	Environmental Scientist
James P. Butner	Environmental Scientist
Robert J. Hunter	Environmental Scientist
R. Michael Morgan	Landscape Architect

OSM ARCHAEOLOGICAL CONSULTANTS, INC.

Carey B. Oakley	President

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REFERENCES

Louisville and Jefferson County Planning Commission (LJCPC). 1979. The Comprehensive Plan: Guided Growth and Redevelopment for Louisville and Jefferson County.

MacGregor, J. 1983. Non-Game Wildlife Program, Kentucky Department of Fish and Wildlife Resources. Frankfort. Personal communication.

U.S. EPA. 1980a. Design Manual: Onsite Wastewater Treatment and Disposal Systems. Washington, D.C.

U.S. EPA. 1980b. Project Background and Environmental Inventory Report for the North County Area Environmental Impact Statement, Jefferson County, Kentucky (Draft). EPA Region IV, Atlanta.

U.S. EPA. 1981a. Alternatives Development Report for the North County Area Environmental Impact Statement, Jefferson County, Kentucky (Draft). EPA Region IV, Atlanta.

U.S. EPA. 1981b. Alternatives Evaluation Report for the North County Area Environmental Impact Statement, Jefferson County, Kentucky (Draft). EPA Region IV, Atlanta.

U.S. EPA. 1983a. Draft Environmental Impact Statement for North Jefferson County, Kentucky, Wastewater Facilities. EPA Region IV, Atlanta.

U.S. EPA. 1983b. Preferred Alternative Report for the North County Area Environmental Impact Statement, Jefferson County, Kentucky (Draft). EPA Region IV, Atlanta.

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